

Nationalization - Tory style

As Westminster digests the political messages which the county council elections sent out last week - and, as always, the elections have managed to be Delphic in their utterance so there is something for everybody if you look hard enough - there has been no shortage of speculation on what, if any, are the implications for the teachers' pay dispute.

The local elections had been seen in advance as one of the landmarks in this particular argument. The teachers' leaders - meaning, to all intents and purposes, the small group around Mr Gordon Green and Mr Don Winter who direct the strategy of the National Union of Teachers - have manoeuvred themselves and their followers into a campaign of direct action which can only succeed if it so embarrasses the local authorities and the Government that it causes new alliances to form and a new deal to emerge from the general convulsion.

It is a high-risk policy because the more often the teachers play the militant card, the more people get used to it and learn to live with it, while cursing teachers, local authorities and ministers alike.

The county council elections are an important reference point because they signify a change in the political structure of the shires - and therefore, ultimately, of the Association of County Councils which forms the largest single grouping on the management panel of the Burnham Committee. Until they were out of the way and the results were fully analysed, it was unlikely there would be any new initiative by any of the main contenders - teachers, employers or the Government.

There has, however, always been a tendency to exaggerate their significance for the teachers' pay dispute. Though there are occasions when particular local issues dominate particular local elections, what

happened last week seems to be broadly in accordance with the expectations raised by national opinion polls, reflecting a general deterioration of the Conservatives' position. The success of the Alliance parties, which has caused an unprecedented number of counties to be hung with no single majority party, is clear for all to see, but on closer examination does not indicate the breakthrough for which Mr Steel and Dr Owen had been hoping. The ACC will have to find ways of accommodating the stronger minority voices in the counties, but it is not clear why the Government should regard the local elections as a reason for going back on its policies for public sector pay. More likely, it will see the electoral rebuff as a strong reason to brace itself against a more robust campaign on pay by all the public sector unions.

Nevertheless, the elections may prove to be important if they now encourage the teachers and their employers to take their own attempts to reach agreement on the outlines of a settlement a step further. The teachers know that the I.O.E.s cannot do a deal with them at much more than 4 per cent without a financial guarantee from Sir Keith Joseph, and without the waiving of penalties by Mr Patrick Jenkin. They ought to know, too, that there is little prospect, as things now stand, of getting that guarantee or the waiving of those penalties.

The great weakness of the Government's position, however, is that it has nationalized this pay dispute - has nationalized all local government disputes - by putting direct controls on local spending, and therefore, local policy.

Mrs Thatcher began her career as Prime Minister with one great advantage over her predecessors of the previous two decades: they had accepted responsibility for all major pay disputes, and by making pay and prices policies central to their economic

schemes, had made every major dispute a dispute with the Government.

As year has succeeded year, however, she has allowed her Government to be drawn, step by step, back into the arena of dispute. No one doubted that in the miners' dispute it was Mrs Thatcher and her Government which called the shots. Now in local government matters - as, for instance, in the political ructions arising from the Scottish rating revolutions - all the odium falls on her administration. In the teachers' pay dispute, there is the tactical situation that the profession must negotiate with employers who are mere puppets of the Government - though degrading impotence most of all.

Having reduced the employers to this parlous condition, the Government can hardly expect them to put themselves out by mounting an obstinate defence of Government pay policies which they have had no part in making. Every thing now suggests the ground is well prepared for a major campaign on teachers' salaries by the profession and the local authorities, jointly; but only if they are prepared to work together to establish the outline of a sensible settlement and put that to the Government and the country. There is, however, one snag. A sensible settlement means dealing with the pay structure and the teachers' contract. It also means grappling with appraisal and linking it to career advancement.

The teachers may suppose the local authorities are so demoralized by Government harassment that they will collectively cave in and let the teachers impose their demands. But why should they? It is now time for the teachers and their employers to show that they can still practise the arts of negotiation, frustrated for so long by the mechanics of Burnham (see below).

COMMENT

Burnham on trial

In announcing a review of the representation of the various teachers' associations on the Burnham Committee, Sir Keith Joseph has added another destabilizing ingredient into the discussion of teachers' salaries. There is, however, a perfectly good case for a review. It's five years since the last one; a review every five years could quite reasonably be made a mandatory requirement in any future re-negotiation of Teachers Act if a continuing statutory body for teachers' pay were deemed to be necessary.

There are two separate parts to this review. First of all, there is the auditing of the membership of the teachers' associations - a difficult technical task which should be done on the basis of publicly stated criteria. The normal practice is for this to be done by the DES. But is this right? If, as Sir Keith has now done, the criteria for deciding who is and who is not a member of each union for the purpose of the review are set out in advance and seen to be fair after public discussion, it doesn't matter greatly whether the exercise is carried out by officers of the DES or by independent auditors. On the whole it would be better to give the job to someone like the Registrar of Friendly Societies (if he had the time) or the Industrial Society which has experience with the intricate membership procedures of trade unions. But there are no grounds for the suggestion that the DES could not be trusted to be impartial.

The second part of the operation is to decide how many seats on the teachers' panel should be awarded to which union. This is where more controversial matters of judgement and policy arise.

Here, too, it would be well to settle in advance, and publicly, the principles at issue before arguing about who should apply them. In practice, the big

question concerns the representation of the NUT. Till now, the NUT's membership has been larger than all the others put together and this has been the grounds for giving the union an absolute majority on the teachers' panel. If the NUT emerges from the 1985 count (based on 1984 membership) without an overall majority, then it clearly must lose its present complete dominance while retaining a large plurality of places. This, in itself, raises the contentious question of the continued representation of the National Association of Teachers in Further and Higher Education. The time has come for NATFHE to bow out. Because NATFHE and the NUT operate what amounts to an alliance this is a consideration of prime importance. Everything suggests that NAS/ UWT, AMMA and PAT have increased their membership considerably since the last count.

If heads' salaries were negotiated separately (and the heads came off the Burnham teachers' panel) it might conceivably swing the balance back in favour of the NUT which ministers would regret, as well as deepening the divide between the function of heads (as experienced teachers most of whose time is spent on administration) and all other teachers. The English educational tradition is based on head teachers not administrators (as in the United States). Many would deplore anything which weakened this.

Clearly, the composition of the teachers' panel cannot simply be left to the teachers' unions themselves. They have done their best to give PAT the cold shoulder - it took the High Court to ensure PAT received fair treatment, the majority unions' action being defended by no other justification than its own decisions, however unfair.

But if it is not to be the teachers who decide, why should it be the Secretary of State? Why should not the unions, collectively, be required to submit a scheme for approval to the High Court, working on principles laid down in advance by Parliament? This, of course, would presume a revision of

the RTA which Sir Keith has stubbornly resisted on the, to him, excellent grounds that he has nothing he thinks better to put in its place. All this could change, however, if the local authorities, emboldened by new blood in the counties, called his bluff and revoked the "concordat" which now gives the DES representation on Burnham a weighted vote amounting to a veto in certain circumstances. If they did so, of course Sir Keith could just increase his own representation - the weighted vote is simply a way of saving the time of officials - but in so doing he would expose the present bankruptcy of Burnham and this might force him to reconsider other matters, such as the separate negotiation of salaries and conditions.

Local hero

Having written (see above) that local elections mainly turn on national issues, it is a pleasure to draw attention to Mrs Joan Main's triumph in Wiltshire, which can only be attributed to local concerns (page 8). Mrs Main's tangling with the Conservative right has been reported in *The TES* - how and how she decided to confront the barons of the Wiltshire Conservatives and stand as an Independent. Her eye for the right-wingers who have been trying to prevent the completion of the county's comprehensive scheme.

It would be difficult to imagine a more direct method of focussing attention on a local issue. When Wiltshire comprehensive system to complete the (which calls in question the future of the right-wing grammar schools) lobbied Sir Keith Joseph against the plan, and Fred Naylor, an energetic pupil teacher, associated with the Conservative Think Tank, the Centre for



Salisbury: bastion of grammar

Policy Studies, wrote an impassioned article in *The TES* defending the grammar schools and rebutting the comprehensive alternatives.

By re-electing Mrs Main, the electors have spoken. But ever equivoal, they insisted on garbling the message. Mr Roger Peach, the most prominent "save our grammar schools" advocate, got back with an increased majority against a former county council chairman, while (to refresh the balance) Mrs Beth Winterton, also a grammar school exponent as well as being a possible right-wing replacement for Mrs Main as chairman, suffered the indignity of being defeated by the SDP.

In the hung council which has emerged, hard right attempts to roll back the comprehensive reorganization will not get very far, but it remains to be seen who will get the education chair. Hung councils are better at stopping things from happening than making them fit.

NO COMMENT

A fuss is brewing over the danger of electric collars for dogs being imported from Britain. The collars give dogs a shock every time they bark. What is really wanted, surely, is something similar for children.

From an editorial in the *Albion* (New), April 24, 1985.

Second Layin on the legal

Parents upset over alleged remarks in press by public school head

by Hilary Wilce

At the beginning of the case of Regina v. Brent, it was noted that the parents of the child were not the end of the story. The Press, in fact, was not the end of the story. The Press, in fact, was not the end of the story.

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French Lycée headmaster Yves de Saint Do (right) and French Ambassador Jacques Vaut at a meeting outside the London school to commemorate the seventieth anniversary of its foundation.

Sheffield sets a rate

Sheffield this week became the last rate-capped local authority to pass a new rate. The city council approved a £218 million budget, £31 million short of left-wing demands, after a five hour meeting on Tuesday.

Earlier Mr David Blankett, Labour leader of the rebel rate-capped authorities, had called for continued non-compliance. Some councillors may still face surcharge by the District Auditor because of the cost of the delay in setting a rate.

Honeyford aims to stay

Mr Ray Honeyford, the Bradford middle school head at the centre of a race row which had led to his suspension, is almost certain to reject an offer to take early retirement.

The city's chief personnel officer, Mr Brian McAndrew, confirmed this week that an enhancement of pension from £6,000 to £8,000 a year plus a lump sum of £27,000 had been offered to Mr Honeyford last month.

But Mr Honeyford, aged 51, said this week that he was not interested in retiring. He told *The TES*: "I want nothing more than to do my job whilst exercising normal professional rights of free expression".

Mr David Hart, general secretary of the National Association of Head Teachers, to which Mr Honeyford belongs, confirmed that the NAHT backed his position.

The controversy centres on an article Mr Honeyford wrote critical of the race relations lobby and some aspects of multicultural education.

The Secretary of State sees the exercise as a one-off affair. We see it as a continuous process," commented Dr Walter Roy of the London East Anglian Examining Group.

Teachers will eventually have to cope with criterion-referenced assessment, where pupils are measured against absolute standards, rather than against their peers.

The NEA thinks that the DES has shirked the real issue, which it sees as preparing teachers to act as assessors for specific syllabuses. Mrs Tattersall believes that examining groups will each have to devise their own training programmes: the manuals and videos to be designed by the Open University for all teachers will be too general.

It would be simpler to shorten the school year and allow teachers two days for training than to organise the cover needed for 60,000 teachers, the NEA argues.

RE status and substance criticized

by Bert Lodge

Secondary schools have allowed religious education for years 4 and 5 to become little more than a study of social and moral problems. HM Inspectors have said in a report this week.

At the same time, inspectors acknowledge that RE has fewer specialist teachers than any other subject. This was revealed by the DES survey of staffing in 1977, and on the latest survey carried out last year the report comments: "Provisional results indicate that... the situation overall remains virtually the same."

In the 62 schools visited, almost half the 232 staff teaching RE to fourth and fifth years had no qualifications in the subject. In two schools, there were no staff qualified to teach RE. In only 30 schools was RE taught by qualified staff.

The report is also critical of the low priority the subject gets in the provision of resources. Sums allocated to the subject range from 14 pence per pupil to £1, with the average being 58 pence. Only five schools had an allocation of over £1 per pupil, while a quarter had less than 50 pence.

Of the schools visited in 26 local authorities, all were county schools mainly in urban areas. While not being statistically representative "they reflect the variety of practice to be found in many other county secondary schools".

A report on the European Parents Association conference held in Milan recently, has been held over until next week.

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The Educational Development Association, which was founded in 1888 and has been involved in In-Service Training since 1905 when it ran its first school at Scarborough, has now issued its programme for 1985. Brief details are given below.

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Mathematics 6-13 years, Language Development in the Primary School, The Organisation of Primary and Middle Schools, The Micro-Computer in Schools, Making Music in the Primary School, Environmental Studies in Primary and Middle Schools, The Magic of Wales, Leadership Management and Organisation in the Primary School, Structure and Content in the Primary Curriculum - New Ideas, Education in the Early Years, Learning and Behavioural Difficulties in the Classroom, Centre for Cultural, Recreational and Leisure Pursuits, Crafts and Creative Skills. Principal: T.W. Hall, M.Sc., Newham Middle School, Balmoral Avenue, Bedford MK40 2PT. Telephone: 0234 62555

NEW COLLEGE, Durham

Nursery and First School Curriculum Development and Management, Management Techniques in Primary Schools, Contemporary Issues in Primary Education, Mathematical Activities in the Primary School, Special Educational Needs in the Ordinary School, Getting to Know Micro-Computers, Gymnastics 8-13, Using the Guitar for music making with children, Comprehensive School Management, Pastoral Care in the Comprehensive School, Guidance and Counselling in Careers Education, Crisis in the Sixth Form - strategies for change, Health related fitness and Sports Training. Secretary: Peter Solomon, Dip. Ed., 5 Crescent Gardens, Hybridge, Devon. Telephone: 0755 37284

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PLATFORM

Andrew Bennett says that few teachers realize the extent of the financial demands made on pupils, or the distress and hardship it can cause for poor families.

Counting out the money

The Labour Party has recently been working on an achievement charter as a blueprint for action in the many causes of under-achievement in our schools. Family poverty seems to be one of the most significant.

Supposedly this country has had free education since 1891. But how "free" is it? In practice, schools are demanding more from parents in financial terms than ever before. Most parents, if you ask them to think about it, will say that each child in school costs them between £4 and £10 per week. That may sound absurd at first, but consider such items as bus fares, school uniforms, money for school funds, football/gym kits, plimsolls. Added to this is the money required for school trips and school photographs.

Sadly, few teachers realize just how much their school is asking of pupils. As an ex-teacher, I know how easy it is to think only of your own little corner of the school and make modest demands. It would be an enlightening activity for most school staff actually to sit down and work out all their financial demands on parents.

Dealing with constituents' problems also brings me into contact with the consequences and problems of school costs. One pupil, for example, wished to take domestic science in the fourth year but knew that her parents could not afford the £3-£4 per week that the course would cost. Instead, she settled for the cheaper option of art. Unfortunately, she was not really happy with the subject which eventually resulted in disruptive behaviour and trouble with the school. The cause of the problem was her resentment at not being able to study the subject she liked best.

For another constituent, I ended up pleading with a housing manager not to evict her for rent arrears. This over-anxious single parent had bought everything mentioned on the school uniform list and, as a result, had not been able to pay her rent.

In her determination to provide her



son with everything so that he would not be singled out as different, she had not realized that half the items on the list were not entirely necessary.

Another constituent complained that even though the school paid half towards the cost of school trips, requests for money still caused hardship. It also caused a great deal of stress.

How can conscientious parents wanting the best for their child refuse money for school trips that they know are of great educational benefit and enjoyment? How does it make parents feel when they have to refuse their child the opportunity of going on the

skiing holiday organized by the school? Maybe they have to say "no" because there are other family expenses of greater priority. Add to this catalogue of costs money for school charity collections, money for summer and Christmas raffles, lab coats, bus fares and the many other incidental expenses that occur.

When I ask teachers about these issues I am always assured that the school solves these problems discreetly. Many parents know that this is simply not the case and, of course, that does not take account of the parents

who desperately want to hide their poverty from the school.

It is too easy for teachers to categorize parents into the deserving and undeserving poor. What teachers often do not understand is that they are expecting poor parents to behave absolutely rationally under conditions of extreme difficulty. It is easy enough to draw up theoretical budgets for low income families but a very different matter to try to live on them.

Schools could attempt to resolve this problem by sorting out requests for money into essential and non-essential categories. The school should then

ensure that the activities of items on the essential list are provided free of charge. The extras that the school offers should then be presented to pupils as genuine unnecessary options. The optional nature of the activities has to be demonstrated by teachers' attitudes towards them.

Unfortunately, far from making progress in this direction, all the evidence is that many schools are becoming money-raising organizations. Witnesses to the select committee on achievement in primary schools told of a school which managed a double its allocation on books in equipment by fund-raising. An extra effort, but should parent-funding to this extent be allowed to happen? Even in relatively affluent areas, there will still be some single parents perhaps who are experiencing strain from such fund-raising pressures.

In low income areas teachers are in particularly difficult position. We are under directives from local education authorities which say that if schools want more money, then they will have to raise it from parents. As kids always ask for the money at the wrong time, don't they? Perhaps something on a Monday morning, just after you have spent up over the weekend. And very often children will blur the essential and the optional, so that parents are not always sure of the significance of the activity. Sending children will not even relay the message home, if they think their parent cannot afford it.

And what of the extra burden on teachers? Perhaps an accounting qualification would be helpful in days. And the effect on teaching standards? While the teacher is counting payments for the geography field trip, he is not teaching geography, is he?

Perhaps we should adapt the old nursery rhyme to "Teacher's in the counting house, counting out the money."

Andrew Bennett is Labour MP for Denton and Reddish and deputy spokesman on education.

NEWS

Auditors seek cuts of £2.1m

by Iola Smith

The Audit Commission has said a local authority should make cuts on its further education provision and school meals service totalling £2.1 million.

A "value-for-money" survey in Mid-Glamorgan alleged the county overspent £1.5 million on further education and £600,000 on school meals compared with 17 similar-sized authorities during 1983-84.

The auditors reviewed staffing costs, student-staff ratios and use of facilities at Ystrad Mynach FE college, and concluded that economies of £214,000 possible in each college could be spread over the entire further education sector to achieve savings of £1.2 million.

The county said cuts of £475,000 had already been achieved since last

September by rationalizing courses and increasing student-staff ratios. These measures were unpopular locally, so it was reluctant to make more drastic moves such as closing a college or axing courses.

Less painful savings were being sought, such as reduction in evening classes and better marketing of courses to attract more students.

The auditors stated that the 1983/84 staffing costs for school meals were too high at £5.2 million. They recommended that fewer staff were employed.

Mid-Glamorgan's allocation of one supervisor per 100 pupils in secondary schools was regarded as generous as was the provision of 700,000 free meals a year.

Jail for juveniles 'ineffective'

by Diane Spencer

Local authorities should pay the costs of keeping young offenders in custody, a social services director told a conference organized by the National Association for the Care and Resettlement of Offenders in London last week.

Mr Tom White, from Coventry, said many authorities would develop intermediate treatment and other preventative services if the alternative was to pay more than £200 a week to keep juveniles locked up.

"If this responsibility were introduced, I think we might see the burgeoning of more effective community services for juveniles," he said, adding that the idea had been floated in a report of the House of Commons Social Services Committee on children in care.

He said there was no justification for continuing to spend large sums of public money on the building, maintenance and operation of ineffective penal establishments.

Ms Vivien Stern, director of NACRO, said: "We use custody too much and too early; 55 per cent of the juveniles sent to detention centres have two or fewer previous convictions."

Research showed that juveniles who are prosecuted are more likely to commit a second offence than those who are referred to centres. In contrast, 80 per cent of youngsters cautioned for a first offence did not offend again.

Ms Stern called for more communal involvement and said the various agencies dealing with young people should develop joint approaches to prevent crime.

This plea was echoed by Graham Robinson, head of NACRO's juvenile crime unit, and Mr David Boyd, one of

the unit's development officers. They presented a joint paper on the experiences of the juvenile crime committee groups set up by NACRO in cities, including Coventry, Teesside, Reading and Hull.

The idea for the groups arose because of the lengthy, complex and costly process of bringing a juvenile to court which involves the police, social services, probation, education, welfare officers and the clerk to the justices.

This led NACRO to conclude that local forum was needed to bring together agencies and the wider community, do strategic planning, avoid duplication of effort and provide a forum for the groups and hoped to develop into more permanent structures. This had already happened in Leeds and Coventry, they reported.

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Oxford applications boom

by Biddy Passmore

The ending of Oxford University's post-A level entrance exam has led, as predicted, to a one-year boom in applications from public schools.

Many candidates who would previously have taken the Oxford exam after A levels - mainly in independent schools - have now had to take it before A levels, in their fourth term in the sixth form. They coincide with the last applicants to take the old "seventh term" exam, producing a bumper crop

schools, an increase of 774.

The expected increase in competition in this change-over year seems also to have deterred applicants from the state sector - down by 112 to 3,969. But the success rates for candidates from the two sectors are virtually unchanged, at 34 per cent of those from the state sector and 47 per cent for those from the independent sector.

Next year, when all applicants must either take the special entrance exam

on the basis of their A levels and an extended interview, the universities hopes that applications from public schools will resume their rising trend. Meanwhile, Cambridge University is considering a change in the timing of its new entrance exam, originally intended to take place in May. Schools have expressed a willingness to support the new exam, which candidates will sit for the first time in 1987, to be taken in late July.

NEWS

Foreign enrolment down by a third

by Hilary Wilce

The number of overseas students at British universities, polytechnics and colleges has declined by more than a third since full-cost fees were introduced, according to figures released by the British Council today.

Numbers have dropped from 88,037 in 1979-80 to 55,608 in 1983-84, an overall drop of 37 per cent, although the decline now appears to be levelling off.

While overall numbers dropped by 2 per cent from 1982-83 to 1983-84, there was an increase of 5 per cent in

postgraduate admissions to universities.

The biggest decline has been at the non-advanced further education level where numbers have fallen by 70 per cent since 1978-79.

Mr Derek Beard, assistant-director general of the British Council said: "Worldwide, about a million people are studying overseas and the number is increasing by 14 per cent a year. But between 1976 and 1981, our market share fell by over 25 per cent and is still falling."

The British Council points out that Britain is losing out to the United States, Japan and France in attracting overseas students.

Japan is planning to increase numbers of overseas students from 10,000 to 100,000 by the end of the century. The United States increased its number of Chinese students by 31 per cent between 1982-83 and 1983-84, while the number of Chinese students studying in Britain went up by only 6 per cent. The United States has also been successful in attracting Indonesian and

Malaysian students.

Critics of Britain's policy towards overseas students say there are too many separate scholarship and aid schemes, targeted at different countries or groups of countries.

A more cohesive policy is needed if Britain is to get its share of students from the boom areas of China, the Far East, and Central and South America, they say. But such a decision would need to be taken at high political level, where the issue of overseas students is considered only marginal.

Union steps up protests

by Diane Spencer

The largest college and polytechnic lecturers' union, NATFHE, stepped up its pay offer protest this week with rallies in six cities around the country.

The union has balloted its 76,000 members on strike action and so far about 100 out of 700 branches have voted in favour. The action is to be selective and timed to coincide with rallies during May, although more militant action is not ruled out.

So far the union has contented itself with withdrawing goodwill in support of its 20.5 per cent claim, to which the management panel has replied with a 4 per cent offer.

At the first two rallies, in Southampton and Manchester, NATFHE leaders pointed to the great injustices being meted out by the Government.

Mr Peter Dawson, NATFHE general secretary, said the average lecturer's salary had declined by 43 per cent since the Houghton report of 1974. He urged the Government to "pay up".

Mr David Trisman, negotiating secretary of NATFHE, told members in Manchester that Sir Keith Joseph's contribution to education was starving it of essential resources and depriving lecturers and teachers of a decent standard of living. "He is less a secretary of state for education, than education's undertaker."

So far there are no plans for another meeting of the Burnham FE committee. It is likely that both sides will await the outcome of the primary and secondary panel's meeting next Wednesday.

Mr Frank Griffiths, a senior lecturer in health and community studies at Teesside Polytechnic, has been appointed as the new education secretary for NATFHE. He takes over from Mr Joney Rees who becomes vice-principal of South West London College.

Exemptions to caning Bill unfair, peers told

The Government does not accept that methods of discipline have to be exactly the same for all children, Baroness Cox said in her first House of Lords front-bench speech last Friday.

Opening the Second Reading debate on the Government's unloved corporal punishment Bill, she said those who argued that an exemption scheme was inherently unfair ignored existing differences in the way pupils were punished. At present, schools, even teachers in adjacent classrooms, might well have different policies. Girls were sometimes exempted from corporal punishment, while boys were not.

Ministers were unconvinced by any of the arguments for enforced abolition, she said firmly. They "were not prepared to ride roughshod over the views of many thousands of parents and teachers that reasonable and

moderate" corporal punishment could be an appropriate sanction.

Lady Cox, who was speaking in her new role as a junior Government Whip, was praised from all sides for her forceful presentation of the Government's case. But few peers thought the Bill merited the presentation.

Lord Stewart of Fulham, a former Labour Education Secretary, said the European Court of Human Rights was bound to rule before long that corporal punishment in schools was an infringement of human rights.

The Tory peer Lord Kinnaird, an abolitionist, also decried the Bill. "We are far too nappy-pamper today," he declared. "But whatever one's personal point of view, one cannot have discrimination. Either we have corporal punishment or we do not. Otherwise, we undermine all authority in the schools."

Jobs plan by TUC chief

The assumption that a better school curriculum would "dramatically increase a young person's chance of getting a job" was misguided, according to Mr Norman Willis, general secretary of the TUC.

"The causes of youth unemployment lie outside the schools," Mr Willis said yesterday addressing a conference on "Unemployment: A Challenge for Education" organized by the Educational Alliance.

Secondly, a 17-year-old bristling with work-related skills may be better able to compete for a job - but only if the job is there to compete for. Thirdly, the job of schools goes beyond meeting the narrow requirements of employers - it is not up to schools teachers to train young people for specific jobs.

Mr Willis said: "Every 16-year-old should be guaranteed either a job with proper training, a place on a high quality reformed Youth Training Scheme or suitable and useful education courses."

Town and country swop

Country cousin Rukhsana Rana of East Oxford primary school, on an exchange visit to the Leafside primary school, in the Cotswolds. The schools - East Oxford is an ethnically mixed, inner city school, Leafside, a village school of about 50 pupils - swop children each Wednesday.

Picture: Rob Judges

Sack threat in 'union loyalty' row

by David Jobbins

A college lecturer faces the sack because he defied instructions from his employers and took an evening off to attend an important union meeting.

Now his colleagues at Stockport College of Technology are balloting on strike action to coincide with a disciplinary hearing on Monday into an allegation of gross misconduct, which if upheld could lead to his dismissal.

Mr Tony Cottan, a senior lecturer in the college's department of building and civil engineering, was elected to the region's executive of his union, the National Association of Teachers in Further and Higher Education in March, and attended his first executive that month.

When he informed the college and the authority that he was to attend the next monthly meeting, he was told he could not be released.

Efforts to reach agreement on alternative arrangements for the students Mr Cottan was due to teach were unsuccessful, and attempts by officials to resolve the issue before the meeting

including calling in ACAS, proved fruitless, according to the union.

A spokesman for the authority said that Mr Cottan had been specifically instructed not to leave the college because he was required to attend an examination class.

"It was the view of the college principal that his primary duty was to attend to the class. As no arrangements had been made and no agreement existed with the unions on facilities for trade union activities, he was given a specific instruction."

Mr Cottan felt it was vital to be at the meeting, as he had been appointed the North West's representative on the steering committee for the union's national conference later this month.

Mr Ian MacKay, NATFHE regional official in the north west, said: "Although he delayed any decision until the eleventh hour to allow time for a satisfactory resolution, the authority remained obstinate."

Mr Cottan attended the meeting on the evening of April 24, the following

morning he was suspended. NATFHE says that this action was taken without any attempt to contact a full time union official, contrary to the ACAS code of practice.

The union pointed out that alternative arrangements had been made for Mr Cottan's students when he attended his first executive meeting.

Mr MacKay commented: "Mr Cottan could not be released from duty for two hours on Wednesday evening to attend a union meeting but he could be suspended from all his duties on Thursday morning."

The union declared that it was in collective dispute with the authority and expected that there would be a return to the status quo as prescribed by its disputes procedure so that a solution could be negotiated.

But the authority, which regarded the decision to involve ACAS at an earlier stage as premature, refused. "This attitude merely makes things worse," Mr MacKay said.



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(0085)

Speed of recruitment campaign alarms NUT

by Bert Lodge

Teachers' leaders have expressed deep concern about a recruitment drive in Leeds for 150 extra teachers which at one stage attracted 110 applications a day.

An advertisement for a "primary needs programme" aimed at children with special educational needs in ordinary schools was first placed in *The TES*, on April 19. Application forms had to be obtained, completed and returned by last week.

Vacancies are for a number of coordinators on Scale 1 and general primary teachers on Scale 1 "to be part of the special educational needs teaching team in a given school".

Successful candidates will start in September with three months' intensive in-house training.

Mr David Dewhurst, secretary of Leeds branch of the National Union of Teachers, said it welcomed the initiative in principle but saw huge problems in the mechanics of the operation. "They are talking about 45-50 Scale 3 teachers. Who is going to process, interview and appoint all that number? To rush it through by the end of May seems to us to be courting disaster."

Mr Dewhurst also questioned the in-house training. "We are not sure what it means. The authority has never explained how it will handle it."

Mr Geoffrey Driver, the chairman of the education committee, said he believed the city was the first authority to adopt such a radical programme. The response had been enormous, with nearly 800 enquiries received. The council was putting £1 million into the scheme with an extra £170,000 for new books and equipment specifically for children with learning difficulties - plus a 25 per cent increase in capitation.

He said: "The expression 'in house' really means 'in authority'. With so many 'new blood' teachers coming in each with a specific task and with the aim of catering for all the curriculum - not just special needs in the Warnock sense - we need to plan very carefully."

Sarah Bayliss reviews research before the Commons education committee

Juniors improve with homework, MPs are told

A strong link between the amount of homework done by junior age pupils and their school performance was revealed to the Commons Select Committee on Education this week.

Dr Clare Burdett, the director of the National Foundation for Educational Research, who gave evidence with three colleagues, said there were increasing signs that where children were set homework, were encouraged by parents to do it, and had it regularly marked at school, there was a steady, consistent association between that and the level of performance.

Mr Derek Foxman, the leader of the NFER's project "Monitoring Performance in Mathematics", said study of fourth-year juniors in 1981 and 1982 for the Assessment of Performance Unit maths surveys had shown a "very considerable relationship" between the amount of maths homework given and pupil's performance in the subject.

The survey had also uncovered a "remarkable" regional variation in amounts of homework given. According to teachers in England, 70 per cent of fourth-year juniors were given no maths homework at all; only 4 per cent were given two hours a week or more.

In Wales, 50 per cent of pupils were said not to have homework while 20 per cent had two hours or more. In Northern Ireland, by contrast, 3 per cent had no maths homework while 50 per cent had two hours or more.

Mr Foxman emphasized to MPs that the survey should not be interpreted to mean that pupils' performance could be raised automatically by giving them more homework. There was a strong correlation between homework and performance, but it could be that pupils were high achievers before they were given homework and that their level of understanding had prompted teachers to issue homework.

He said that the correlation strongly depended on the number of hours given.

What was not known was the level of performance before homework was given. "In spite of our results we do not know to what extent homework actively raises attainment."

Mr Foxman confirmed that the performance of individual pupils was reflected in the national picture. Tests on children in Northern Ireland showed they were the top attainers in every area of mathematics. Children in Wales came second in traditional areas of maths such as computation, fractions and number. The south of England tended to come second to Northern Ireland in terms of modern maths - shape, sets and statistics.

The NFER research, to be published this summer in a review of mathematics surveys from 1978-1982 by the APU, has particular significance in the debate about homework begun by Sir Keith Joseph, the Education Secretary, last month when he issued a discussion document.

That listed possible objectives for homework and asked if a good case could be made for more well-directed homework for older pupils in primary schools. Local authorities, teachers, parents and governors have been asked to submit their views by the end of June.

In answer to MPs' questions about the effect on young children of starting school before the statutory entry date, Dr Burdett said the NFER had recently approached the DES about possible two to three-year research into the

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Homework performance... a function of parental encouragement

range of entry dates allowed by different authorities and the effects on children. She hoped a decision would be reached soon.

There was a growing tendency for children to start school in the September of the school year in which they were five. An NFER survey carried out in September 1983 showed that only 8 per cent of i.e.s.s. admitted children termly at statutory age. This compared with 34 per cent admitting termly or half-yearly at rising five - that is, in the term before the child's fifth birthday - and 28 per cent who admitted annually in September at four.

The remaining 30 per cent operated mixed policies: three-quarters admitted annually at four in some of their schools. There were signs that the trend towards earlier admission was continuing; 20 per cent of i.e.s.s. had recently changed their policies in that direction and 24 per cent said changes were being contemplated.

Written evidence from the NFER drew attention to recent research which shows an "unexpectedly high" incidence of bright children being withdrawn for specific subjects weekly or daily into "enrichment" groups. In research begun in 1982 one-third of

junior schools said they had enriched groups and one-third of all large junior schools were setting at least one year group for at least one subject.

These figures represent a considerable change in junior school organization: when HMI carried out the primary survey from 1975-77, enrichment groups and setting were rarely encountered.

Representatives from the National Association of Chief Education Officers said their staff found it difficult to do "preventative" work in primary schools because of the cuts and demands made by secondary schools.

Mr Brian Field, president elect and chief education welfare officer for Manchester, said a 1979 survey had suggested that 30 per cent of pupils absentism was condoned by parents. He believed that parental involvement begun in the primary schools might change some parents' attitudes towards their children's running.

He advocated joint in-service training schemes for teachers and educational social workers so they could share their expertise, and said he would like to encourage primary teachers not to see referral of pupils to the psychological service as a failure on their part.

NEWS

Assisted Places pupils top 20,000

by Bert Lodge

The number of pupils at independent schools having their fees paid wholly or partly by the Government's Assisted Places Scheme has for the first time reached 20,000.

The scheme was introduced in 1981 to allow able children from poorer families to benefit from an independent school education. The annual census carried out by the Independent Schools Information Service and published this week shows a further 3,589 pupils admitted this year, bringing the total to 20,023.

This has outweighed a drastic cut in the number of places paid for by local authorities, from 14,012 to 10,492. Altogether, the 1318 schools taking part in the census (representing four out of five independent school pupils in Britain), have registered an increase of 2,330 pupils this year, bringing the total to 419,350. Much of this increase is due to a boom in the number of pupils under eight.

The survey also shows that the tendency continues for parents to cease paying for their children's education once they have taken O levels and let them transfer to the maintained sector for sixth-form studies. From the leading boys and girls' schools 5,575 pupils aged 15 and over went into state schools while only 1,740 transferred in

the opposite direction. Another tendency worrying girls' schools in recent years is that of parents transferring their daughters to boys' schools for their A level studies. While 2,493 girls switched to the maintained sector a further 1,824 were moved to another independent school.

Though fee rises continue to outstrip inflation the rate has slowed down and at 7 per cent this year was closer to the rate of inflation of 5 per cent than for many years. At the same time capital investment has increased from £83.7 million to £95.9 million.

Girls now make up 42.5 per cent of independent pupils, having risen from 175,814 last year to 178,448. This includes 2,443 day girls and nearly 200 more boarders. The downward trend in boys boarders continues however with 300 fewer.

Teacher-pupil ratios show a marginal improvement. The overall average ratio across all schools is 1:11.7 compared with 1:11.8 last year. At senior level the ratio has improved from 1:13.5 to 1:13.4.

More than 13,000 of the pupils in the census are foreign, bringing in £47 million in foreign currency.

Annual Census 1985: 1916: 56-Buckingham Gate, London, SW1. £1.

Villages win free transport

by Biddy Passmore

Parents in two Suffolk villages have won a four-year fight to get free school transport for their children. They will now no longer have to choose between paying £20.50 a term for the school bus or allowing their children to walk along a busy main road.

The county council had refused to provide free transport for some 200 children from the villages of Capel St Mary and Stratford St Mary to East Bergholt High School because it was less than three miles away.

Under the 1944 Act, children of eight and over are deemed capable of walking up to three miles to school. But the parents maintained that the route used by the council to measure the distance was dangerous, as it involved walking along the busy A12. Their campaign to make the county change its mind involved a march along the route with police escort.

Last Monday, a special panel of councillors investigated the matter for themselves and agreed with the parents that it was not a suitable route. The alternative the council has now designated is over three miles, so the children qualify for free transport.

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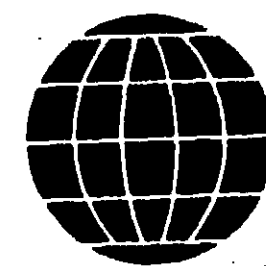
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مكتبة من الأصل

TES staff report on the latest attempts to reform the teachers' pay negotiating body

DES influence over Burnham talks resented

by Mike Durham

Renewed pressure last week from the local authorities for reform of the Burnham Committee is only the latest in a long series of attempts to bring teachers' pay negotiations into line with other public sector professions.

But this time, in the context of the worst teachers' strikes for 20 years, there is a greater urgency about the appeal - which also has the support of some trade unionists.

Last Wednesday a delegation from the two local authority associations and LACSAB, the advisory board which conducts pay negotiations on their behalf, met officials of the Department of Education and Science for exploratory talks.

The move follows last year's call by education authority politicians from the Council of Local Education Authorities, for reform of the Burnham structure.

But the chances of persuading the Government to make any fundamental changes in the way teachers' pay is bargained over are almost universally thought to be slight in the extreme.

The employers, from both the Conservative-controlled Association of County Councils and the Labour-run Association of Metropolitan Authorities, have grave misgivings over several aspects of the Burnham Committee structure.

The main bone of contention is the so-called "concordat" by which two representatives of the Department of Education and Science can wield 15 votes in the management panel of the committee, effectively dominating the proceedings.

The "concordat" was a "gentleman's agreement" arrived at with the DES soon after the present Burnham structure was formed in 1965, but it has never been enshrined in an Act of Parliament.

In addition to their 15-vote weighting, the DES officials have an overall veto on the central issue of the size of an offer made at any time to the teachers.

This system ensures that any management pay offer to the teachers' panel is effectively "cleared" with the Government before it can go ahead.

The DES representatives can arrive at a figure independently from the employers or instructions from the Secretary of State.

At one management panel meeting three years ago, the local authorities established the DES position only by going through the size of a pay offer decimal point by decimal point, until they reached a figure at which the civil servants raised their hands to veto it.

Senior civil servants and Sir Keith Joseph himself are alike understood to be strongly against relinquishing their powerful influence on the conduct of teachers' pay negotiations.

Where the local authorities hope to make rather more headway is on reform of the Remuneration of Teachers Act, the legislation which governs the size, composition and terms of reference of the management and teachers' panels.

In particular, the employers have long been in favour of combining talks on pay and conditions in a single negotiating body - a stance shared by some, but not all, of the teaching unions.

The nine steps to reform ...

The employers have set out their proposals for Burnham reform in a nine-point plan, delivered last week to a deputy secretary at the Department, Mr Philip Halsey.

On the question of whether heads and teachers should have separate negotiating bodies, however, the employers cannot agree. They have tabled alternative recommendations. One is for separate bodies, and the other is a single joint body.

The other eight points are:

□ Pay and conditions to be discussed together.

□ The new committee to be voluntary and non-statutory.

□ Membership to be freely agreed between all the participants. (At present the Education Secretary has overall control over the numerical composition of both sides of the Burnham Committee.)

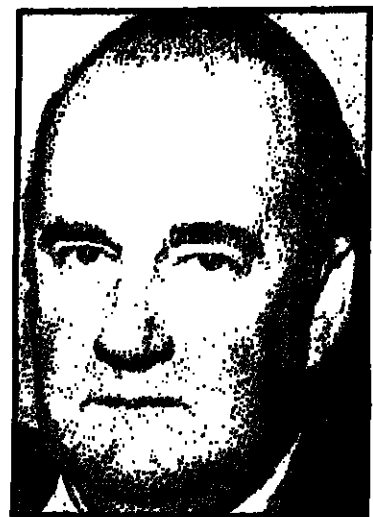
□ The body to have a written constitution.

□ Seats to be available to the Education Secretary's representatives, either as observers or full participants. If as full members, no more than two DES representatives, with only one vote each.

□ No veto by the Education Secretary's nominees, either on the Management Panel or in the joint body.

□ Agreements reached by the new body to be legally binding on L.E.A.s and teachers by a new clause in teachers' contracts of employment.

□ A chairman drawn in alternate years from each side of the joint committee.



Sir John Worde

At present pay is discussed in the Burnham Committee, while conditions of service are the sole concern of the CLEA/School Teachers Committee. It would be in the employer's interests to link the two, so that trade-offs and internal bargaining could take place.

The local authorities and the NAS/UWT are also calling for a fundamental change in the status and composition of the Burnham Committee - dismantling its position as a statutory body and making it a voluntary forum for free collective bargaining like most negotiating bodies.

As it stands, the Burnham Committee, which is chaired by Sir John Worde, is appointed by the Education Secretary according to what many believe to be an out-of-date formula. It operates according to bureaucratic and time-consuming procedures which have been conservatively described as "quaint".

A spokesman for the Local Authorities Conditions of Service Advisory Board (LACSAB), which services the Burnham Committee, said: "We would like to see the sort of body which already exists for most public sector negotiations - a voluntary, collective bargaining body with a non-statutory basis."

LACSAB officials already service 25 other local authority pay negotiating bodies, none of which is run with the same amount of government intervention.

Review threatens NUT's majority

by Richard Garner

Moves by Sir Keith Joseph to review the profession's representation on the Burnham committee threaten the NUT's majority on the teachers' panel - and could pave the way to structure talks next year.

The Education Secretary announced his decision last Thursday, and followed pressure for a review from the National Association of Head Teachers, which does not support this year's teachers' pay claim, and the Professional Association of Teachers.

It has been welcomed by most teachers' organizations except the NUT, whose deputy general secretary, Mr Doug McAvoy, described it as "vindictive and unnecessary" and "a retaliation against the union for our successful salaries campaign".

Sir Keith has asked the unions to give him details of their membership figures at December 31, 1984 by the end of June - and said he intended to complete his review by the New Year.

He has specified that only part-time and full-time qualified or non-qualified teachers in maintained schools in England and Wales be included in their returns.

Membership of the teachers' panel was last reviewed by his predecessor, Mr Mark Carlisle, and resulted in the non-striking PAT gaining a seat on the committee in 1981. Teachers' unions were then told to submit their membership figures for December 31, 1979.

At present, the NUT has 16 seats on the panel, the National Association of Schoolmasters/Union of Women Teachers seven, the Assistant Masters' and Mistresses' Association four, the NAHT two, and the Secondary Heads' Association, the PAT and the National Association of Teachers in Further and Higher Education one each.

The NUT has been able to rely on the support of NATFHE and the casting vote of the NUT-appointed chairman to determine panel policy. On one occasion, when the panel called a halt to the structure talks, the casting vote was necessary for a majority as NATFHE abstained. It was conducting its own structure talks in further education with the employers.

The NUT has been giving its membership as 235,000 - although it acknowledges the figure it will be giving Sir Keith will be lower because student and retired members must be deleted.

An annual report to this year's Easter conference quoted an in-service membership by December 31, 1983 of just over 204,000. Its officials say it has gained 6,000 members during the last year.

The NAS/UWT quotes an in-service membership figure of 127,000 - but this includes Northern Ireland (about 7,000) and Scotland (some 2,000).

The AMMA says its membership has passed the 100,000 benchmark during the past two or three weeks. However, it has about 13,000 members in independent schools and its deputy general secretary, Mr Peter Smith, said he was confident that its members in English and Welsh maintained schools were more than 70,000. A ballot of its membership on strike action during the current dispute resulted in 71,500 forms being distributed.

The NAHT gives a membership figure of 21,500 - although its current in-service membership is reckoned to be 20,800, according to its general secretary, Mr David Hart, who says this is an increase of 600 from the end of last year.

The PAT, the newest addition to Burnham, says its current membership is about 32,000. However, since it recruits throughout the United Kingdom and in independent schools, its general secretary, Mr Peter Dawson, acknowledges the figure for Burnham would be 27,000-plus.

However, he says its size has increased rapidly over the last few months and that the correct figure for Sir Keith's purpose would be 24,000-25,000.

The Secondary Heads' Association, which a year ago agreed to admit deputy heads for the first time, says it

now has 4,500 members. The NATFHE does not recruit in primary and secondary schools.

A fair assessment of the relative strengths of the various unions could, therefore, give the NUT 210,000 members, the NAS/UWT 118,000, the AMMA 70,000, the PAT 24,000, the NAHT 20,200 and the SHA 4,000 (number of deputies having recently joined). On this assessment, the combined strengths of the other unions compared with the NUT would be 236,200 to 210,000. Even if the NUT's 235,000 figure proved to be correct, it would not represent most of the teaching profession.

However, all unions insist they should be independent valuations of the figures - so the review can be seen as fair.

Sir Keith will have to rule a whether:

● The NUT should retain its original majority;

● The NATFHE should retain a seat on the teachers' panel;

● Seats should be allocated with a view towards the percentage of potential members - a factor which would be the NAHT and SHA which are only recruited from the higher echelons of the profession.

His announcement comes after months of a union recruitment war. Last year the SHA decided to admit deputy heads for the first time - a decision which NAHT may also take at its annual conference later this month. The NUT is planning to remove the right to vote membership so that those in its ranks who currently also belong to, say, NAHT, must make up their mind where they stand in pay disputes.

In addition, the annual report of the AMMA made it clear it was considering its future recruitment drive in primaries. Until now, it has been considered mainly for secondary teachers.

The review's most likely outcome is the ending of the NUT's inbuilt majority which - since it used it to most effect to scupper the structure talks - could open the path for reopened discussions on some kind of package including assessment, lunchtime supervision and cover as well as pay early next year.

The PAT's Mr Dawson said Sir Keith's announcement was "the best news since VE day. I doubt if the NUT could validate an in-service membership of 200,000 now."

Mr Nigel de Gruchy, deputy general secretary of the NAS/UWT, said that even on a conservative estimate of other unions' figures - the NUT looked to have lost its majority. Such a move would be in the best interests of unifying the profession and could be welcomed by the NUT in the long run.

Mr McAvoy retorted: "We will seek to prove that the representation afforded to the union remains justified. We believe any review to be unnecessary and vindictive."

Mr Hart, for NAHT, said he was anxious to remove the procedure whereby only one person could speak for the teachers in a full negotiating meeting of the Burnham committee.

He acknowledged that the review decision could make his union's campaign on separate negotiations for headteachers and a reform or repeal of the Burnham committee "a longer term possibility".

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Other teachers ... an international round-up

United States

Despite continued complaints about the shortage of funds for education, the average teacher in the United States is enjoying a 7.3 per cent pay rise this year - roughly double inflation. Nationally, annual teacher salaries now average \$19,500, compared with \$18,200 in 1983-84.

But there are wide variations both in pay levels and sizes of the increase. Alaska is by far the most generous employer. Perhaps it has to be, to attract teachers to work in the severe climate. Teachers there earn \$33,000 a year - way above the \$24,100 offered in the second-placed New York.

Washington DC, Rhode Island and Michigan, all pay more than \$22,500, and California and Wyoming are not far behind. But some states, notably in the South and Mid-West, are far less generous. Mississippi is bottom of the national pay league by a wide margin, offering annual salaries of only \$13,300. Second lowest is South Dakota, with \$14,500.

This year's average increase conceals wide variations. Teachers in Nevada received a rise of 0.7 per cent, and Mississippi salaries only went up by 1 per cent. In neighbouring Alabama, however, there was a 14.3 per cent rise.

Because official statistics are not yet up to date, it is difficult to tell whether teachers have improved their position in the American national pay league. Last year, the median weekly pay for a teacher was \$334, against \$380 for "professional specialists" - a classification which includes engineers, natural scientists, registered nurses and hospital interns.

Skilled manual workers were paid an average of \$320 a week, and unskilled workers \$240. Median pay for college and university teachers in 1984 was \$440 a week.

Bill Norris

Teachers around the world face spiralling inflation and shrinking salaries. In some countries, such as the United States, improvements in pay and conditions have been closely tied to a shake-up of traditional career structures. In others teachers' salary and status are steadily deteriorating. On this page TES correspondents summarize those differences.

Australia

Australian teachers are generally well paid and have fairly good working conditions.

Salaries vary from state to state. A teacher out of university or college, with a four-year degree, would start on \$10,500 in New South Wales, and about \$10,500 in South Australia.

A middle-ranking teacher (someone who has been in the service for eight years or so) can expect to earn between \$14,200 and \$14,700 a year.

At the top end of the teaching service, a secondary school principal gets paid between \$20,500 in Queensland and \$24,200 in South Australia.

The salary of a middle-ranking teacher compares well with the national average salary in Australia which is about \$10,500 a year, and is about level with that of architects and accountants, but lower than that of solicitors or lawyers with eight or nine years experience, who would earn about \$18,500.

Luis Garcia

France

Although French teachers' salaries have not kept pace with inflation, their strikes are protests against austerity measures and deteriorating conditions in schools rather than demands for more money. In February, the most powerful state sector teachers' union accepted a 4 per cent rise.

Most state school teachers have civil servant status and form a rigid hierarchy with numerous categories, each on fixed pay scales.

A primary school teacher starting at \$450 a month can expect to finish his or her career at \$700 a month while the lycée teacher who has passed the arduous *agrégation* examination will progress from \$580 to \$1,250.

This compares favourably with the legal minimum monthly salary of about \$350 and the national private sector average of \$625. It is much less than a doctor or upper-ranking manager who can earn about \$1,600 a month and approximately the same as someone in middle management.

Mary Follain

Ireland

Teacher unions in Ireland have lodged a claim for a special pay rise of 18 to 22 per cent in addition to the annual public service pay rise, to make up for "slippage" in comparison with other groups of workers over the past four years.

The claim has, predictably enough, been rejected and is going to the public

services arbitrator next month.

Primary and secondary teachers are on a common basic salary scale with extra pay for qualifications and promotion posts. The 26-point scale runs from IR£7,921 to IR£14,978 (\$6,600 to \$12,500). A general degree attracts an extra \$400 a year and an honours degree \$1,000.

John Walshe

West Germany

As civil servants, most West German teachers enjoy the privileges of higher than average incomes, generous allowances and pensions, and smooth-running wage negotiation machinery within the massive public sector framework. Once qualified, a secondary modern school teacher might expect to gross around £770 a month, including family and other allowances built into the salary structure. A grammar school teacher of the same age would earn approximately £130 a month more.

At 40, the secondary modern salary amounts to £1,050 a month - about £200 more for the grammar school - again including allowances. By retirement, these monthly salaries would have risen to about £1,250 and £1,500 respectively.

All that puts teachers among the better paid members of West German society, where the average monthly salary in industry last year amounted to £744. Top of the industrial earnings league are energy sector workers, grossing an average £898 monthly.

Paul Bendelow

Netherlands

A radically revised structure for Dutch teachers' salaries has recently been agreed upon after much wrangling between Mr Wim Duetman, the Education minister, and teacher unions.

The structure is already effective for secondary teachers, but will not apply to primary staff until August.

The plethora of salary groups - more than 60 according to one ministry official - has been replaced by three salary scales which are linked to job function rather than qualifications.

First-grade salaries starting at £653 and rising to £1,430 a month gross compare favourably with other professions where a long period of study is involved. Teachers with the second-grade diploma get salaries from £540 to £1,050 a month. This again compares favourably with intermediate professional levels.

The salary structure for basic (4 to 12) school teachers starts at £478 and rises to £961. This is roughly what policemen earn.

Lynn George

In common with all civil servants, West German teachers lose only an average 20 per cent of their pay in statutory wage deductions, compared with 32 per cent for private sector employees.

Neither is the teacher's work load open-ended. They are contracted to teach a specific number of 45-minute periods a week - the average being 25. And in addition, they receive a "thirteenth month" annual salary bonus.

All that puts teachers among the better paid members of West German society, where the average monthly salary in industry last year amounted to £744. Top of the industrial earnings league are energy sector workers, grossing an average £898 monthly.

Paul Bendelow

Belgium

Teaching in Belgium is not the career it used to be. Government austerity measures have undermined some of its attractions, pensions in other sectors have caught up with those of teachers, and enforced wage restraint in the public sector has worsened pay levels.

With take-home pay in mid-career of about £500 a month for a primary school teacher, £550 for a lower level secondary teacher and £560 for a teacher of the higher classes in secondary schools, where a university degree is required, teachers are nowhere near the top of the salary ladder.

They earn less than doctors, lawyers, accountants, whose average earnings are estimated in the range of £12,000-£13,000 a year and are less than skilled workers in heavy industry (£11,000 to £14,000 a year). They often earn less than skilled self-employed workers.

The lowest teaching salary, that of a new primary teacher, is about £7,000 a year and the highest £12,000.

Anne Good

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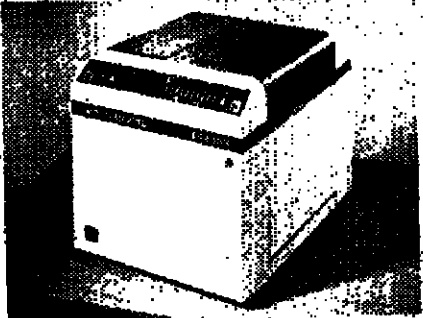
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Doug McAvoy

NUT calls for jobs' boycott and demands talks on county's appointment and promotion policies

L.e.a. accused of bias against ethnic teachers

by Howard Sharron

Teachers are being asked to boycott all multicultural posts advertised by Leicestershire L.e.a. and to refuse to attend courses on multicultural education until the authority agrees to discuss NUT claims that institutional racism is widespread in its policies.

The boycott is part of a "collective dispute" declared against the council because of union disquiet over the way it is allegedly failing to appoint and promote ethnic teachers. The authority is also under attack for what are claimed as inadequate policies on multicultural education, and accusations of mispending more than £1

million in special Government grants for ethnic minority children.

The NUT and ethnic minority groups in Leicestershire claim that grants allowed under Section 11 of the 1966 Local Government Act have been used merely to bolster the general curriculum and pupil-teacher ratios, rather than meeting the extra and specific needs of ethnic pupils, as the law and Home Office circulars demand.

The Home Office tightened up its guidelines in 1983 after widespread allegations of abuse of Section 11 money and insisted that L.e.a.s. - which spend 80 per cent of the grants - conduct reviews of current Section 11 posts, explaining in detail how the money was being used.

In Leicestershire, the education officer of the Indian Workers' Association, Mr Satish Kapur, also a teacher in the county, sent a report to the Home Office explaining that many schools said to have Section 11 posts did nothing to meet the needs of ethnic pupils and could not even identify the incumbents.

The Home Office wrote to Leicestershire on February 27, saying it was not satisfied with the information offered on the use of the cash. It demanded more details on Leicester



Leicestershire insists that Section 11 money is being used to meet the specific needs of black children.

shire's analysis of ethnic minority needs, and how they were being met post-by-post, and hinted that unless the application for renewed funding were "reorganized", money could be withdrawn.

It is understood that 120 posts, including 87 teaching and support jobs in schools, funded by Section 11 money have yet to be successfully justified by the authority. A meeting has been called with secondary headteachers in schools where Section 11 posts are supposed to exist.

The deputy director, Jennifer Wisler, maintained that the Home Office inquiries were routine and denied that the meeting she had called for today is a crisis meeting. She said it was simply to gather more information about Section 11-funded activities in schools. This did not mean that she had no idea how the money was being spent at the moment, she said.

However, her letter to headteachers summons them "as a matter of urgency" and points out that "the continuation of these posts in future will depend on my satisfying the Home Office on the points they raise".

She insists that the money has been used properly to provide extra staff for the specific needs of black children in

the county's schools. But a closely restricted L.e.a. report called *Social Deprivation and Staffing in Primary Schools*, produced in January this year, is understood to suggest that Section 11 money has been used to avoid providing black schools with extra "social deprivation posts" out of mainstream finance - and not therefore to meet the specific needs of black pupils.

In Leicestershire's four most deprived schools according to DES criteria, the two "white" schools - Bembow Rise and Crescent Junior - have a total of four social deprivation posts with another recommended, and no Section 11 posts. But the next two most deprived schools, Shenton and Uplands, are predominantly black areas, have no social deprivation posts but four Section 11 posts each.

This suggests that Leicestershire has been prepared to meet the cost of extra posts in socially deprived white schools out of its general budget, but has not been prepared to do the same for black schools. The use of Section 11 money for general staffing of this kind cannot be said to meet the criteria for its legitimate use.

Peter Fleck, the secretary of the Leicester city division of the NUT, said: "We have known for years that

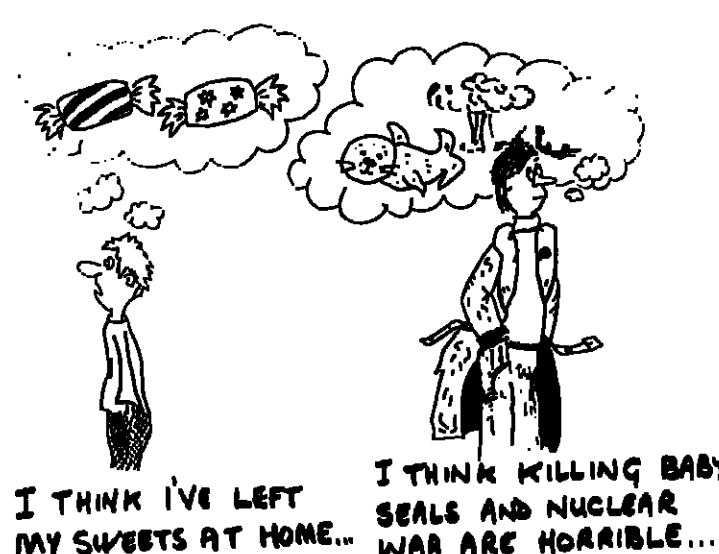
Section 11 money has been misused because our members have informed us that they were appointed, or have since been designated as Section 11 employees, without their being consulted."

"We intend to make sure our members do not become the victims of the authority's misuse of Section 11 money. But there is also a principle involved. There is a real need for funding for ethnic minority needs and we would actually be stealing from Leicestershire's black community if we did nothing about the situation."

The NUT points to the small number of ethnic teachers appointed and promoted by the authority as an example of the way the black community in the county has been poorly treated. Despite a county-wide ethnic population of 9 per cent and an ethnic population of 22 per cent in Leicester city itself, the percentage of ethnic teachers is only 1 per cent of all teachers and only two deputy heads and two deputy teachers from ethnic backgrounds. There are only 90 ethnic minority teachers in all of Leicestershire - out of a complement of 7,700.

Dave Pollard, the secretary of the NUT's county division of Leicestershire, said this type of discrimination was perpetuated by the county's policy on multicultural education. There was a complete confusion by the L.e.a. between multicultural education and teaching of English as a second language. "As a result, senior multicultural education posts are given to ELL teachers who are invariably white, while black teachers with experience in multicultural education and modern language teaching are never appointed."

He said the NUT recently had a typical example of this when a white ELL teacher was appointed to a social multicultural post over Mr Satish Kapur, who has a research degree in multicultural education. The NUT backed Mr Kapur, who alleged racial discrimination, in an industrial tribunal. But the case was lost for lack of proof.



Artist's contrasting impression... middle-school view of child and youth

12-year-olds in limboland

Sarah Bayliss reports on research which reveals how middle-school pupils feel lost between childhood and the teenage world.

"Being 12 has its drawbacks, in fact it's nearly all drawbacks: bed at nine, no respect, a pittance for pocket money. It all adds up to 12 being a bad age."

So said a pupil from Heaton middle school, Bradford, in a dramatic presentation of research into children's self-perceptions by class teacher Mr David Brett.

The project titled "What Kind of People Do You Think We Are?" - was presented by 14 children from Heaton at a recent conference of the Middle Schools Research Group at Bradford and Ilkley community college.

Mr Brett is currently on a one-year secondment at the college, taking a diploma in professional studies in education in the middle years. He decided to include his own pupils in a study of how children viewed themselves. Did middle-school pupils still see themselves as children?

More than 200 pupils completed a questionnaire on the characteristics of children, youths and middle-school pupils. They tended to think that childhood ended just before 11 and that youth began at 12½, leaving a gap in the middle. They commented a lot about this transitional phase and about their own status.

After the initial survey the children were asked to write about themselves answering, if they could, the question "Who am I?" Mr Brett has often asked for this kind of descriptive writing but, as he told the conference, children have never before displayed such self-awareness. "I found their comments were much more perceptive after doing the questionnaire. They focused very sharply on particular features of themselves."

Mr Brett asked the conference whether schools should encourage pupils to reflect more about themselves. He believed it had been a useful exercise at his school. He also wanted to establish more about the effects of school organizations - on the way children viewed themselves.

Mr Bill Ogilvie, head of North Farm middle school in Leeds, urged heads to adopt a more participative style of decision-making, particularly where pupil numbers were shrinking.

In a talk on the management of contraction, he also said that salary

scale points were possibly being squandered in small schools on "obsolete" structural provisions such as year leaders and heads of departments, when they might be more usefully employed elsewhere in the school.

Mr Ogilvie, who last year interviewed six heads of middle schools, said it might be assumed that as schools got smaller their bureaucracies got simpler, but his research had shown this was not the case. As posts fell vacant and lay unfilled, heads regretfully asked individual teachers to take on more roles instead of changing the structure of the school.

He had met teachers who were head of department, head of year as well as being responsible for a curriculum area such as multicultural education.

"This raises questions about the appropriateness of the structure which is being held together by a dwindling number of people."

Contracting schools could not be managed effectively unless headteachers had the capacity to change and shift their ways. Their traditional power was diminished since they had few opportunities to exercise patronage, such as offering salaried promotions to teachers.

Opportunities for planning ahead were limited and heads often had to make last-minute decisions. Their relationships with staff were sometimes strained, especially if they had to keep asking people to take on more responsibilities. It was not a happy head who had to say: "Good morning, Jones. You're head of French from today. Congratulations."

All the heads he had spoken to were deeply concerned about the effects of contraction. They all found the job harder, emotionally and physically, than in a stable or expanding school. All were keen to be interviewed - an indication perhaps of the stress they were under.

Four out of six had been unable to gain internal promotion for the past five years. Two heads had been unable to make an external appointment for five years and the most recent external appointment in six schools had been two years before. The most recent appointment of a probationary teacher had been in 1978. "That is the figure I still can't believe," said Mr Ogilvie.

Whitehall tries to kill myth

The Civil Service Commissioners made great efforts last year to demolish "the myth of the male, Oxbridge arts graduate" as the main source of recruitment to the top ranks of the Civil Service, their annual report says.

But these efforts, and attempts to speed up the selection process, have not been enough to stop a growing number of Britain's brightest gradu-

ates from spurning a career in the service in favour of more highly-paid jobs elsewhere.

Although a higher proportion (59 out of 66) of the vacancies for fast-stream graduate entrants were filled last year than the year before, over 13 out of 60 remained unfilled, the overall quality of the 1984 intake was not as high, the report says.

Graded tests help pupils' language

by Susannah Kirkman

Graded tests in modern languages have a generally positive effect on classroom practice, according to HM Inspectorate.

In a report on modern language teaching in north-west England where graded tests are used, HMI observed that pupils in most of the schools they visited had a positive attitude to learning languages. And at a third of the schools inspected, the number of pupils opting to take a foreign language in the fourth year had increased, despite staffing and timetabling problems.

"In schools with receptive teachers, the influence of [the tests] seems to have been positive and beneficial," the report concludes. Although some of the teaching was "outstandingly good", HMI felt that other teachers needed to change their teaching approaches radically to emphasize the comprehension and oral skills demanded by the tests. More in-service training was essential to improve teaching methods and to help those teachers whose command of the lan-

guage they taught was "noticeably weak".

Standards of work were mainly satisfactory in 85 per cent of the lessons seen, while outstanding work was noted in 37 per cent of the 177 lessons observed in Cumbria, Lancashire and Wigan schools. But one lesson in seven did not produce satisfactory work, a cause for concern.

HMI defined unsuccessful lessons as those where English was used too much and structures and vocabulary were mechanically drilled. The Inspectorate also criticized a failure to challenge average and more able pupils and to help all pupils develop strategies for aural comprehension.

The report's recommendations could have far-reaching implications for modern language teaching in schools throughout the country. More than 70 per cent of L.e.a.s. use graded language tests and the GCSE criteria for modern languages have been heavily influenced by graded test schemes, including the north-western tests.

Call for adult guidance service

A national strategy to provide an educational guidance service for adults was called for in a consultative document published last week.

The Unit for the Development of Adult Continuing Education says educational guidance for adults had been seen in the past as a minor and marginal activity by most teachers, trainers and educational institutions. This had led to a great waste of resources and human potential, says UDACE. In its first major report since it was set up last July, "The key to the development of the 'learning society', which we will need if we are to manage the economic and social changes of the next decades, must lie in helping adults to recognize their learning needs and find effective opportunities to meet them," says the document *Helping Adults to Learn*.

UDACE proposes that each education authority sets up a guidance network which would bring together various agencies and services (libraries, careers, trade unions, the Manpower Services Commission) and teachers.

Helping Adults to Learn, UDACE, 193 De Montford Street, Leicester LE1 7GE.

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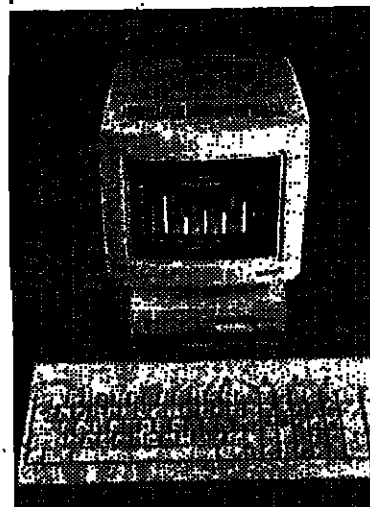
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After 14 years as principal of Homerton College, Cambridge, Alison Shrubsole is about to start a new career... as a rabbit farmer in Spain. Interview by Pauline Gay.

Leaving the field to the carnivores

Teaching has yet to establish itself as a profession, says Miss Alison Shrubsole on her retirement after 28 years as a college of education principal.

"We are not getting our act together," claims the woman who has been head of Homerton College, Cambridge, for the last 14 years.

One reason, she believes, is that teachers have allowed unions to create quite unnecessary divisions. Another is that they have not become sufficiently involved in the debate about curriculum and content.

"My own view is that teachers should not strike," says Miss Shrubsole. "I am very conscious that I say that having had a good salary as a principal over a number of years. But I believe it doesn't help us to become a profession."

"I certainly think teachers are underpaid. But I also believe there is something more subtle, than straightforward financial considerations. I suppose there must be universal acknowledgement of low morale in schools."

Miss Shrubsole, who received the CBE in recognition of her services to education, is convinced that teaching has become increasingly difficult, particularly now that there are such sophisticated views of what can be done for children with learning problems.

Her first job in a college of education - at Stockwell in Bromley, Kent - involved her in training students for the two-year Certificate in Education.

At the age of 32, she went out to Kenya during the Mau Mau terror to

set up the first Government training college for African women.

The college was literally on the drawing board when she arrived. That meant the new principal sleeping in a tent and hearing giraffes falling over the guy ropes at night.

High heels and a bag of pepper were her defence against terrorists. "The only time we were attacked it worked very well indeed," she recalls.

In those Kenya days she met the man she married last year, Mr George Hilton Brown, then a district administrator in the old Colonial Service.

When he first proposed 24 years ago she found herself forced to choose between a marriage and a career. She knew his work meant living in lonely places in different parts of the world, and realized it was a way of life she would not have found totally satisfying.

"The answer then, regrettably, had to be no. I didn't expect him to wait. But fortunately he did."

Now at 60 she embarks on a new life helping her husband run a rabbit farm, 3,000 feet up the slopes of the Sierra Nevada mountains in southern Spain. But she has also bought a cottage in Tunbridge Wells to keep a foothold in England.

In 1963, Miss Shrubsole left Kenya, and became principal of Philipa Fawcett College in London. Her brief was to treble its size and mix the college as fast as possible.

Her early years as principal at Homerton were highly critical for the future of the college as Cambridge University debated whether to open its



doors to the college of education.

One of her most successful achievements was to help secure Homerton's future by steering it into membership of the university so it could offer students a prestigious four-year Cambridge BEd.

But for all the tensions of these early days it seems to Miss Shrubsole that she took charge of Homerton as she puts it in an "enjoyable" period and left during a "carnivorous" one.

After years of heading expansion and development, her last two years as principal proved highly taxing with eight enforced staff losses and financial restrictions. But as she left Homerton she had the reassurance that the college's path once again looked secure.

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Bill Norris meets Phyllis Schlafly, formidable crusader for right-wing reform

The lady loves a fight (she usually wins)

The readers of *Good Housekeeping* have voted her the third most admired woman in the world this year – behind Nancy Reagan and Mother Teresa (but above Princess Diana and Mrs Thatcher). It is not a view shared by too many American educators – a fact which leaves Phyllis Schlafly supremely unconcerned. Mrs Schlafly is a woman with a universal of causes, and one of them is to restore sanity to the schools of America. She also loves a fight.

In her time she has beaten presidents, Congress and the media to their knees, claiming victory in her campaign to defeat the Equal Rights Amendment. Now that the political climate of America is more to her liking (she would have made an ideal running-mate for Ghengis Khan) she faces the task of school reform with implacable confidence, and finds time to give a little boost to President Reagan's "star wars" programme on the side.

Interviewing Phyllis Schlafly, in her office next door to the Church of Scientology at the foot of Capitol Hill, is not an experience for the faint of heart. A mother of six (and four times a grandmother), and a lawyer who qualified when well past 50, she bears a remarkable resemblance to the late Ingrid Bergman in one of the more tightly coiled: the blonde hair is drawn tightly back; the smile, which rarely reaches the grey eyes, exposes perfect teeth. Formidable is the first adjective which comes to mind.

Her power base is the Eagle Forum, a right-wing pressure group which boasts more than 70,000 members, paying an annual subscription of \$15 (£11.80). But it might be more accurate to say that the power base of the Eagle Forum is Phyllis Schlafly.

She claims that there are teachers among her membership, though she is unable, or unwilling, to say how many. Certainly a number came forward to give evidence before last year's Department of Education inquiry into the so-called Hatch Amendment, which formed the basis for Mrs Schlafly's latest book: *Child Abuse in the Classroom*.

It was that book which, last November, prompted the issue of regulations to enforce the Hatch Amendment. At least, that is what Mrs Schlafly claims, and certainly the rules came out only three weeks after its publication. Having done nothing for six years since the law was passed by Congress, the

Education Department had finally been goaded into action.

Profoundly, the regulations have satisfied no one. They lay down that parental permission must be obtained before any public school student is asked to disclose information about political affiliations, sexual behaviour and attitudes, potentially embarrassing psychological problems, critical appraisals of their family life, illegal, anti-social, self-incriminating and demeaning behaviour, and a few other things.

Liberal organizations complain that the regulations are ambiguous, and have a "chilling" effect on teachers. They claim that they open the way for the far-right fringe (by which they mean Mrs Schlafly and her friends) to launch assaults on a wide range of classroom activities, such as open-ended discussions, creative problem-solving, student autobiographies and journals, and courses in sex and drug education, and evolution.

They quote an instance in Missouri where parents used the Hatch Amendment to protest against the showing of the film of *Romeo and Juliet*; and one in Georgia where a memo was circulated to teachers restricting classroom discussion of evolution, abortion, communism, religion, witchcraft, personal inquiries and "valuing".

Discussions of death and dying and promotion of critical thinking have been objected to in Pennsylvania; and the use of a seventh grade health textbook in Florida.

Faced by these criticisms, Mrs Schlafly maintains a patrician calm. In her view the regulations do not go nearly far enough. She points out that they prohibit nothing – only require parental consent – and that they merely affect programmes which receive federal funding. Federal money accounts for only 8 per cent of expenditure in American schools.

To make her point she has a few horror stories of her own. More than a few. She quotes parents whose children have been required to play "survival games" in which, for example, they have to decide who is to be thrown out of a lifeboat; 12-year-olds who have been given a multiple choice question on the optimum way to commit suicide; third-graders asked "how many of you ever wanted to beat up your parents?"; and first-grade children given a death education programme in which they made their own coffins out of shoe boxes.

UNITED STATES

She quotes one sex questionnaire in which adolescents were asked how frequently they masturbated, and how often they engaged in light or heavy petting.

Allegations like those have made Mrs Schlafly's book a bestseller. She calls it "a revelation to the American people".

It is into its third printing and has already topped 100,000 sales. Curiously, in spite of their damaging implications for the teaching profession, her charges have not been challenged by the National Education Association,

which boycotted the hearings on which the book is based. A spokesman said this week that it had not got round to checking them out. The association does claim, however, that the witnesses were "coached", and that many were members of the Eagle Forum.

Reduced to its basics, Mrs Schlafly's argument is that American schools spend too much time exploring the feelings and attitudes of their students, and too little teaching them facts and skills. She says: "The most important thing is the failure to teach reading. The fact is that we have 25 million adult functional illiterates – people who cannot read and write well enough to fill out a job application."



Phyllis Schlafly... grudging admiration, touched with fear

"The NEA's whole attitude", she said, "is that they should have the academic freedom to do whatever they want to do with our children, and we parents have no place except to make cookies. I don't accept that. I think parents have the right to give their children the kind of education they want, and that parents and children have the right to have their values and not have them ridiculed, harassed, or diminished in school."

"People send their children to school to learn essential skills and essential facts, not to have them played with or victimized by unlicensed psychologists in their classrooms. I also think that anyone using public money has to put up with other people looking over their shoulders."

Though her scorn for the NEA is unmeasured (by contrast, it looks at her with grudging admiration touched with fear) Mrs Schlafly believes that many teachers are as critical of the education system as she is – and that many good ones have left the profession as a result. She pulls out a statistic that 48 per cent of teachers in the Chicago public school system have left their children privately educated. "That tells you a lot", she says.

Now that the Hatch Amendment regulations are in place, she and her supporters are moving the battle to the state legislatures, trying to get similar measures adopted. So far the only success has been in Arizona, where a Bill has passed through one house, but these are early days.

If she succeeds, the NEA will have real cause to worry, because the states control a large proportion of education funding. For its part, the union is urgently lobbying Congress, trying to get the Hatch Amendment repealed.

Fallout at the top

The fallout from the resignation under pressure of two senior US Education Department officials, because of their opposition to the special education of handicapped children (TES, April 26), continues. Two more have resigned because, it is said, they disapproved of the way Ms Eileen Gardner and Mr Lawrence Uzzell were treated.

The latest to go are Mr Thomas Moore, Deputy Assistant Secretary for Public Affairs, and his special assistant, Ms Terri Lukach. Neither has been available for comment, but sources within the Education Department say that Mr Moore advised the Education Secretary, Mr William Bennett, that he should let the controversy blow over. He was rebuffed by the Assistant Secretary Mrs Anne Graham, who counselled Mr Bennett to speak out against their views.

Rita di Giuseppe

Shuttle jitters start to appear as NASA seeks Space teacher

The tens of thousands of American teachers who made an instinctive mental leap into Space when the decision to send one of their profession on the 1986 Space Shuttle was announced, have been growing increasingly apprehensive.

Every state has appointed a committee to select two teachers from whom the final selection will be made, but there are still some unanswered questions before President Reagan names the happy teacher on the fourth of July.

The National Aeronautics and Space Administration (NASA) in Houston says confidently that the school district employing the teacher will be asked to pay his salary, but at least one school district thinks otherwise. Mr Gerry Konigsberg, who is responsible for the exercise in the Houston Independent School District said that NASA had agreed to meet the cost. In Texas itself, home of Mission Control, more than 400 have applied, though that is a figure lower proportionately than those of other states.

Ms Kathy Atkinson, who is overseeing the project in Boston, Massachusetts, was equally confident that NASA would be footing the bill. She said that 248 applications had been

received there and a committee was vetting the applications, mainly with the physical and mental stresses in mind.

In Houston, one school suggested as an enthusiastic supporter of the plan, which everyone agreed had been prompted by the President himself, turned out to be less than ecstatic. The principal of the J G Whittier School, Mr Frances Earnest, said that three of her staff of 24 had immediately submitted their names for consideration when the scheme was announced. Since then two of them had had second thoughts ("too far from home" said one in a burst of frankness) and the third had in the end failed to complete the necessary voluminous documentation in time.

The teacher chosen will have a hard task ahead: it takes something like two years of hard work to complete the assignment, and it is assumed that the successful candidate will be required to accept all kinds of engagements to justify the trip. It is possible, too, that he or she will become typecast to an unwelcome degree. Certainly there is no intention to limit the applications to those with a scientific bent, so that the aim is clearly of a much more general application.

Frank Poley

OVERSEAS

'Appalling' O level failure rate provokes crackdown

The Zimbabwe Government has announced tough new measures to try to raise education standards in the country.

The Minister of Education, Mr Dzingai Mutumbuka, has announced an end to the practice of automatic promotion of pupils who failed examinations and promised punitive measures against all teachers found shirking their duties.

Slightly fewer than 23,000 (33 per cent) of the 68,000 pupils who took the Cambridge School Certificate examinations here in 1984 obtained more than three credits. Only 12,861 obtained five or more.

Previous general pass rates had never been below 60 per cent during the pre-independence Rhodesian period for white, Asian and Coloured (mixed race) pupils and were always more than 90 per cent of blacks.

During that period only a tiny minority of the country's school-age blacks received secondary education. Last year's poor exam results coincided with a tripling of the number of O-level-age pupils from 24,500 in 1983 to 70,300.

The huge jump was due to the

ZIMBABWE

Mike Williams on why the Mugabe Government has been shaken by this year's exam results

Government's post-independence policy of free primary education and entry to secondary schools for all who want and can afford it. Total primary enrolment jumped from 819,000 in 1979 to 1.2 million in 1980 (2.1 million last year).

The announcement of the low pass rate in March led to a storm of criticism and the Prime Minister, Mr Robert Mugabe, said: "It is hardly an exaggeration to describe the results as appalling. We cannot at all accept a level of performance where considerably less than 50 per cent of the candidates achieved the minimum number of passes or attained above average grades."

Accusing fingers have been pointed at unskilled teachers, textbook shortages and poor classroom facilities. One parent-teacher association – at Dzivarweswa secondary school in Harare, where only 63 of 431 O-level candidates passed the exams – blamed the poor showing on drinking, dating and marijuana-smoking by pupils. The

PTA banned boys from wearing dreadlocks, and girls from perming their hair.

In his statement, Mr Mutumbuka threatened to fire, demote or withhold annual bonuses from teachers found neglecting pupils, "chasing female pupils" and drinking. Some teachers and headmasters were known to have neglected their duties to pursue business ventures, he said.

One thing no one has blamed, publicly at least, is the enrolment expansion itself, though that is the clear cause of most of the problems.

In doubling the number of teachers since 1979 to 62,000, the number of underqualified teachers has also been doubled, to about 30,000. Members of the education community say warnings that the expansion must be slowed have fallen on deaf ears at Cabinet level since 1983.

Meanwhile, the Deputy Prime Minister, Mr Simon Muzenda, has opened a remedial programme for school-leavers who failed the exams in the Midlands town of Gweru. Similar remedial programmes are being organized elsewhere, and pupils are being sent to private colleges in Harare.

But with about 90,000 pupils expected to sit for the Cambridge examination this year, some educators fear such remedial projects are little better than putting sticking plasters on a broken arm.

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(0079)

The problems of physics as a practical subject

Sir - As an ex-physics teacher now teaching electronics and control technology in a TVEI scheme, I read with interest Bryan Chapman's letter (TES, April 26) regarding the shortage of physics teachers. Putting the blame on TVEI is not fair. As an MEP (or ex-MEP) electronics and control technology coordinator, Bryan, along with his fellow coordinators, must shoulder much of the blame, if blame is to be shouldered.

MEP has introduced many physics teachers to the new and exciting developments leading to their disillusionment with physics. Physics is still taught, but label and method have changed. It is now technology, control technology, engineering science or even robotics.

It must make sense that after five years of MEP some attempt is made to transfer the knowledge gained from the Diamond (MEP's computer) into the schools, so that interested teachers can see the new technology operating in the classroom and not just be made aware of the possibilities.

It is also being recognized that the only practical way to retrain sufficient teachers for the new technology is in the classroom with the pupils. All of the physics teachers in the two schools involved in the Bradford scheme teach either electronics or control technology.

Disappearing act

Sir - Bryan Chapman, in his otherwise excellent letter (TES, April 26) misses the point that physics is disappearing from some schools now.

The recent DES paper on the science curriculum suggests a rather low total of 20 per cent of curriculum time should be spent on sciences in years four and five, even for those pupils who are to be the scientists and technologists of the future. This is then used as a justification for teaching

No centralism

Sir - Mick Farley's attack on examination boards (Second Opinion, April 26) makes no mention of the CSE boards, which is just as well. He would find it very difficult to ignore the substantial contributions made to curricular growth, the widespread use of oral examining, of continuous assessment, of thousands of Mode 2 and 3 syllabuses, reflecting what is taught in schools and, happily, applicable to the majority of 16-year-olds taking public examinations.

The boards, jointly controlled by teachers and local education authorities, have made a tremendous impact on the educational scene; the grading scheme was pioneered by them, as were many pre-vocational courses initiated by teachers in schools long before the present bandwagon got rolling.

But Mick Farley's greatest sin is his advocacy of a central body to run all examinations. At a time when schools, i.e. a.s and examination boards have a community of interest in resisting the growing intrusion of central government in curricular matters, the establishment of a national body to control the law paves the way for the centrally controlled curriculum.

In this what Mick wants? If not, is there not a case for the spread of school-based examinations within the framework of the common system, reflecting curricular change and the growing influence of the CSE philosophy, even in the face of national

Out of touch

Sir - If Harry Greenway MP seriously believes that "more money is going into schools than ever before. In fact, we were aware of this when it was discovered what is really happening."

I find it incredible that he should be so out of touch with what his Conservative colleagues on Ealing Council have been doing to reduce educational provision over the last six years.

Among other things, they have:

gy - with the result that at least one will not have the title "physics teacher" next year!

The use of funds in the classroom rather than in the ivory towers of the MEP RICS must surely be the next stage if the new technology is to develop, even if it does mean some of the seconded MEP officials have to return to the chalkface.

It is to be hoped that once the TVEI schemes have learned how to use the new technology in the classroom then the message can be spread and every school can become a TVEI school with adequate resources, but this cannot happen overnight. Nor can it happen if as soon as one school gets extra resources its neighbour cries foul, unfair to those children not on the scheme. Few, if any, teachers cry foul, unfair to those children not involved with, for example, the school play.

At a personal level my move to the TVEI scheme gave me no salary increase and the technical help on average less than that I enjoyed as a physics teacher. What I do enjoy is a maximum group size of 20 pupils, not, I would claim, "unbelievably small" if compared with other practical subjects (eg housecraft and CDT) but much smaller. I would agree, than I could expect as a physics teacher. Better apparatus provision is also an attractive

integrated science at this level. The result, if the advice is followed, will be that the physics elements of the course are watered down, and are often taught by a non-physicist. The same applies, of course, to the elements of biology and chemistry. It follows that the pupils do not get the spontaneity and depth of specialist teaching which they deserve. They do not understand the word physics. Integrated science does, however, provide the Government with a convenient solution to the shortage of physics teachers - abolish their subject Science for All? I do not think I am being unduly puffed when I demand properly resourced and taught science for all.

Market forces? Am I being unduly cynical when I ask what price the law supply and demand in the present teachers' pay squabble?

ROBIN PARKER
Senior physics teacher
The Bedwell School
Lender of SDP group
Stevenage Borough Council

tion, but while capitulation is adequate is not unlimited as some of TVEI opponents seem to imply.

My pupils do not have to (but some do) obtain components for projects from second-hand circuit boards, a they would have to in some schools, but we do not have adequate funds to purchase teaching systems for all our requirements.

An examination of the role of the physics teacher within the school may lead to a better understanding of why there are so many vacancies for new physics teachers. Unfortunately physics examinations after being taught by chalk-and-talk methods (producing, believe, a low level of understanding).

As a result, the senior management within our schools does not understand the problems facing those who wish to teach physics as a practical subject. In general the need for extra funding, limited class sizes and a properly equipped room for control technology and electronics is understood, as these subjects have been established as practical subjects with assessed practical projects.

JOHN G WALTON
4 Armitage Avenue
Brighton
W Yorkshire

sics teachers - abolish their subject Science for All? I do not think I am being unduly puffed when I demand properly resourced and taught science for all.

Market forces? Am I being unduly cynical when I ask what price the law supply and demand in the present teachers' pay squabble?

Framework needed

Sir - It was good to see that you could find space in the midst of the host of newsworthy education stories for the Bedford Way Paper by Aldrich and Leighton on "Education: Time for a New Act" (TES, April 26).

The most striking feature of the education service in England and Wales in 1985 is not that it has crises and problems (clear though those are) but that it manages to perform well in spite of its difficulties. Unfortunately its performance is bound to be hampered until all concerned have a common framework within which to work.

Many of us have maintained for a long time that the 1944 Act (with all the subsequent mini-legislation) no longer provides an adequate basis. The new paper by Aldrich and Leighton enlarges admirably on that point and makes what I believe is an undeniable case.

The present flurry of central government activities (by DES, DE, DoE and agencies like the MSC and SCS) provide some welcome developments and some doubtful ones. Together they certainly do not represent a coherent strategy for the whole of the public education service.

The need clearly is for a major Act which defines the entitlements of individuals, and the responsibilities of the providers - principally the local education authorities.

GORDON CUNNINGHAM
Education officer
Association of County Councils
60a Eaton Square, London SW1

ly with the Government's irrational demand for reductions in local authority spending, a policy that Mr Greenway has consistently voted for in Parliament while trying to distance himself from its effects in his constituency. The trouble with attempting to ride two horses at once is that, sooner or later, you're bound to fall off.

HILARY BENN
Labour education spokesperson
Members' Room
Town Hall
New Broadway
London W5

Calculated only to depress

Sir - I was interested to hear about the "revolution in maths teaching" which is to be launched in September by the 300 Cockerill missionaries, involving the use of calculators and computers.

As part of my work as remedial teacher in a well-heeled secondary school in Hertfordshire, I have advocated since my arrival in secondary education three years ago. There is one major problem - lack of resources. The calculator normally used is mine - children frequently arrive without pens and pencils, let alone calculators - and we can only have the computers when they are not in use by the timetable computer studies groups (£500 for one for my room is just not available).

Bear in mind that of the nine computers available in the school, one is on loan for project development work in home economics, two were subsidised partially by Department of Industry grants (PTA paying the remainder) and the rest have been wholly paid for by PTA funds - none from the local authority or DES.

Our computer studies room is being refurbished by parental labour and finance. When it is ready for use it will not be suitable for maths groups or many other curriculum groups, because as yet we do not have sufficient hardware for classes of 30-plus to work usefully in CAL situations. What happens in areas with lower income parents? How do they tool up for the revolution?

As with so many things, Sir Keith has belatedly (Cockerill was pub-

In addition . . .

Sir - I am sorry to disappoint Sir Keith Joseph and his mathematics missionaries, but the use of the calculator in education is nothing new. The Egyptians introduced them a long, long time ago to aid the understanding of mathematics - called the abacus. We in West Glamorgan may be

lished three years ago) jumped on an attractive and almost certainly worthwhile bandwagon, for that is all it can be until the community at large is prepared to pay the price for education in the 1980s involving technology and manpower. It is, I expect, about to be a revolution with no extra cost.

It is worth pointing out that with the pressure to examine our 14 to 16-year-old pupils, more money is spent by the authority on examinations per child than on education.

I, sir, am a teacher of 20 years' experience. During that time, as a believer in education, I have improved my own level of education with eight years of part-time study almost wholly at my own expense. I am tired of being told that I am part of a failing profession. I am tired of being told to raise the standard of my performance. I am tired of working in a poorly cleaned, poorly maintained environment, and I am even more tired of the time I have to spend on fund-raising projects for the essentials in education: books, paper, equipment, computers, calculators.

I do look forward to the return of the good old days when I started teaching: employers who were keen to employ teachers to reduce class size; who had the will and ability to raise funds for repairs, cleaning, redecorating, equipment, books, essentials such as paper, and the materials deemed necessary for the teaching of maths, science, craft, etc.

EM HERD
43 Dunsmore Road
Luton

returning to the use of the abacus as the authority has withdrawn its 50 per cent support grant for the purchase of microcomputers in schools.

CHRISTOPHER JOHN INCE
Bishop Gore School
De-al-beche Road
Skeppy
Swansea SA2 9AR

Tough questions

Sir - Both major unions have decided, so far, not to attack examinations directly as part of the pay dispute. However, in some areas a coincidence of circumstances seems likely to ensure that this summer's candidates are threatened far more severely than by losing the odd day's teaching in the run-up to the examinations.

The circumstances necessary for this to happen are as follows. The unions need to be operating a rigid no-cover ban for absent teachers. The authority does not provide supply staff for colleagues who are absent on examination work (attendance at coordination meetings, 16-plus moderation, etc).

Heads and/or the education officer refuse to sanction the sending home of pupils if their teachers are absent on such business. Consequently, the examiner or moderator cannot attend his meeting or visit schools and marking and assessment cannot then follow.

Thus, as part of the action, a number of parties are obliging the teacher who is an examiner or moderator to dishonour his contract with the examining board, this when neither he nor they have any quarrel with the board. Locally, I have found that the response from the union's action committee to pretend this is an accident of war and that nothing can be done about it, an attitude which might or might not indicate a latent hostility to examinations and examiners.

There has been, for a long time, a most unsatisfactory situation over examination work as the NASUWT publication, "Teacher Involvement in Examinations and the case for Remuneration", has most cogently described. It is wrong that the examination system should be subsidised by the extra work



Exams under threat

done by colleagues when teachers are absent on examination board business, not only that connected with marking but also that generated by the very heavy demands of GCSE development.

But that is a problem of some standing; arguably the unions should have addressed themselves to it with a little more determination before this dispute.

What is wrong is for some union activists to attempt to disrupt examinations in the way I have outlined above. I know their defence is that the authority should supply adequate cover but in some cases that is not happening. Given that this failure has been a long standing policy it is sophistry for the unions to pretend the matter is beyond their control.

Yours faithfully
A J MORTEN
Chief Examiner at O level SUJB
Member, JMB and NEA geography subject committees
Keighley
West Yorkshire

Wrong view

Sir - Juliet Gardiner, in "What is women's history?" (TES, April 19) misrepresents my views on Coates' Britain since 1700. The alteration of

some words and phrases in the second edition does not transform it into a neo-sexist textbook. The changes are merely a reluctant nod at women's history.

I do not "particularly welcome" this

Defining racism

Sir - The feature editor's choice of the term "black racism" (TES, April 19) and the insertion later of the colour adjective "black" before the word racist was unnecessary and thoroughly offensive and emotive. It introduced a tone which was not present in the rest of the article.

Having since received an explanation from the chairperson of AACAA for the hostility at the meeting, it is easy to believe why the presence of white people at some seminars is a constraint to free discussion. It is less easy to understand why that information isn't provided when asked for prior to the event.

The chairperson's reply, with, I believe, offer a definition of racism, but there will always be those who find it difficult to accept that racism is simply more than prejudice between races. Any attempt to define terms had to make use of existing language, redefine or coin new vocabulary.

If we take Alison Redgrave's definition of racism (TES, April 5) as prejudice plus power and follow her argument through it suggests that, however well-meaning white people are and no matter how much they desire equality with black people, all white people will remain racist until that equality is achieved. If this is the case, new terms are needed to define what many people now perceive racism to be.

MARGARET WELLER
61 Park Avenue
Chapelton
Sheffield

CATE policy

Sir - Professor Colin Lacey in the article "Never mind the quality, feel the width" (TES, April 19) has got his facts wrong.

The Council for the Accreditation of Teacher Education (CATE) has never proposed, let alone insisted, that "virtually all teachers on the PGCE engage in 30 days' classroom teaching each year". This is a misreading of a question in an early proforma sent to only a few institutions, seeking information on the time staff spend in schools. The school experience requirements of the Criteria are set out in Section 4 of the Annex to Circular 3/84. There are no "regulations" as to how these requirements are to be met. There are many ways in which staff without up-to-date experience as teachers of the age range to which their training courses are directed can be provided with opportunities to demonstrate their teaching effectiveness in schools. CATE is at present considering the possibility of issuing a CATE-note on the subject, which will illustrate the variety of existing good practice.

WILLIAM TAYLOR
Chairman
CATE
Elizabeth House
York Road
London SE1

Double think?

Sir - I fail to see the logic in the views of Colin Lacey. In one breath he states that his department delegates its responsibility for supervision of student teachers on placement to classroom teachers, for his staff are far too removed from the classroom to undertake the work; and in the next breath insists that these same staff undertake important research of great relevance to education, teachers and teacher training.

DIANE MONTGOMERY
Director of Learning
Difficulties Project
Clipsy Hill Centre
Kington Polytechnic
Kington upon Thames

Letters for publication should be kept as brief as possible and typed on one side of the paper only. The Editor reserves the right to cut or amend them.

book: I should be quite happy never to see the blue piles (of whatever edition) in a history stock cupboard ever again.
CATHERINE ROSS
Advisory Teacher for History
ILEA

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Science for all

PHIL MUNSON

At first reading it would appear that the national criteria for science and the concept of "science for all" as advocated in the Department of Education and Science's policy document *Science 5 to 16* are not incompatible. Indeed, it would be inconsistent if they were, considering the source of each document. Thus it would seem that those currently working on curriculum development initiatives in science would do well to consider strategies which would exploit this relationship.

Sufficiently general guidelines for the development of a science course for the GCSE might be:

- 1 It has a time allocation of 20 per cent (about 160 hours).
- 2 It leads to a double certification. (Science/Further Science).
- 3 It takes note of the content orientated assessment objectives but places them in a process/skills context.
- 4 It takes account of the specified prerequisites for GCE A level science courses.

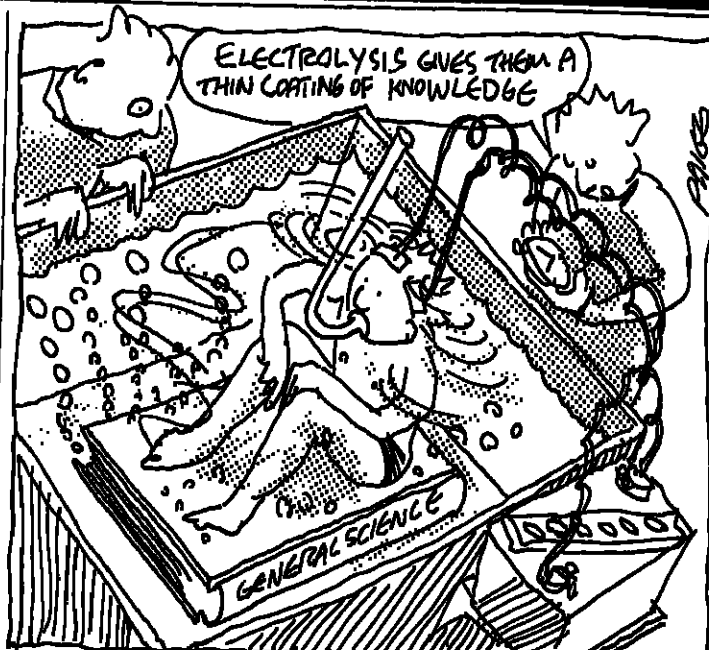
The first two guidelines complement each other, since any GCSE taking up this amount of time justifies a double certificate.

The third guideline needs to take account of the national criteria specified for the separate science subjects, the assessment objectives laid down in the science criteria and the current trends in science curriculum development.

Primary school science is certainly being developed with emphasis on the processes and skills of science, and much science is now presented to lower secondary school pupils in a similar way. It would thus appear inconsistent to develop a GCSE course in science which significantly changes this emphasis.

The best approach would appear to be to develop a course which still clearly identifies the science process and allows the pupils to demonstrate their mastery of the science skills. The content areas would be carefully chosen to exemplify the processes and skills being communicated.

This should not be impossible since



this approach is certainly in sympathy with the aims laid down in the science criteria. These include such terms as "well designed studies of experimental and practical science," "to develop an informed interest in matters of scientific import," "to develop abilities and skills that are relevant to the study and practice of science, are useful in everyday life, encourage safe practice," "to stimulate curiosity interest and enjoyment," "to promote an awareness that the applications of science may be both beneficial and detrimental to the individual, the community and the environment".

In identifying specific content areas for such a course it would seem sensible to read the science assessment objectives in conjunction with the minimum core content outlined in the assessment objectives for the separate sciences. The presentation of such content areas should also take account of their applications and relevance to the pupils, making explicit the science/technology links whenever possible.

The fourth guideline raises an issue that is often quoted by those who are concerned about the demise of the separate sciences for secondary school students. They suggest that a "science" course will inevitably have a reduced content, which is undoubtedly true, and will thus not provide an adequate foundation for advanced level separate science courses. This is not really a

Minus coursework

MARGARET BROWN

The TES summary (April 5) of the recently published National Criteria for Mathematics was surely undeservedly rose-tinted. The suggestion that practical and investigational skills are emphasised seems perverse when they are cited only in the 17th out of 17 assessment objectives. (OK, they are there, but as they constitute two of the six Cockcroft requirements they could hardly have been omitted entirely, could they? And, by way of comparison, "recall of knowledge" appears in the first assessment objective, "setting out work clearly" and "drawing accurate diagrams" occupy the second and third respectively, with "performing calculations" as a close fourth.)

It is of course splendid that oral, mental, practical and investigational skills will at last form part of the assessment (a minimum of 20 per cent of coursework). But why, unlike teachers of other subjects, are mathematics teachers allowed to dodge coursework assessment until 1991? How many of them will actually still be in post then, given present conditions?

What your correspondent failed to tell us was that at least 50 per cent of total marks will still be awarded on performance in timed written examinations. Perhaps someone could explain for what reason, other than simply IMB precedent, it is admissible to assess English Literature, but not mathematics, entirely by coursework?

It is significant that, while the assessment of practical and investigational skills is not elaborated upon, the conditions laid down for the examination of content are extraordinarily detailed.

First, there is an unduly restrictive requirement that all full-range schemes must offer at least three levels of assessment, each with a separate syllabus. In many schools this will lead to a sorting-out of pupils into rigid bands by the beginning of the fourth year, if not earlier.

Second, for all grades up to and including grade C, almost all of the syllabus is prescribed in length; and

unmistakenly traditional, lists. The only scope allowed here, even with school-based examinations, is by virtue of the fact that some of the syllabus descriptions are just sufficiently imprecise to allow determined and ingenious teachers to interpret them in unorthodox ways. Could "congruence", for example, refer to component assembly rather than triangles? Difficult, though, to do much with "the four rules applied to vulgar and mixed fractions", or "angle between tangent and radius of a circle".

But among all this amazing euphoria surrounding GCSE, there still seems to be one major unresolved problem. At present, about one in three children are ungraded (or unentered as they are expected to be ungraded) for mathematics in CSE/GCE. The general GCSE criteria state quite clearly that the standard of the new GCSE grades must be "no less exacting" than the corresponding grades in the present examinations. It seems to have got around that GCSE is for all, yet no one has explained how the apparent contradiction between this and the previous statement can be satisfactorily resolved. Sir Keith Joseph's Sheffield claim that all children will soon be able to achieve at the present average rings pretty hollow in today's climate.

Perhaps I am being unreasonably negative. No doubt my personal bias show through. For having worked for two years with a large group of teachers and others to develop a graded assessment system leading eventually to GCSE certification, I believe there is a positive alternative. All pupils could be credited with evidence of their achievements as they progress through the secondary school, using a mathematical framework which is appropriate to the 1990s, rather than the 1950s.

My worry is that, in spite of containing one important move forward, these criteria may on balance distort the good practice in some of our schools and render more difficult developments in curricula and assessment such as our own.

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L'oeuf du curé

MICHAEL J SMITH

The GCSE criteria for French give "official" recognition to the healthy trend which has been evident in modern language teaching over the past few years: the emphasis on a practical, rather than a merely academic, use of language. The fact that the listening and reading comprehension tests are to use authentic material such as weather forecasts and menus is to be welcomed. Public recognition is given to the realization that foreign language learning is not only about gaining an examination success but also about the ability to survive in a foreign country.

The encouragement of positive attitudes towards foreigners and their languages is clearly a laudable aim which no one could fault and yet I find it sad (and here is my first reservation) that this should appear under the heading of French. Our pupils would be more likely to develop such a healthy attitude if they and their parents had not seen Russian, Spanish, Italian and even German completely out of favour with foreigners and school timetables. They may well question with their teachers, the unspoken assumption that "foreign languages" equals ubiquitous French.

The offering of insights into the culture of French-speaking countries also has a decidedly moral attraction which will surely be supported by all language teachers, who are usually enthusiasts for the countries whose tongues they teach. Here, I believe, is careful about where we place the cut-off point below which pupils will not be permitted to enter for the examination at all.

Whatever the socio-moral attractions of comprehensive education may

be, the least able pupil experiences extreme difficulty with anything in a foreign language. Even public notices and signs, menus and brochures are incomprehensible to some. If in our enthusiasm for the more realistic criteria we force these pupils into an unrealistic and frustratingly difficult task, we are doing them a disservice.

I have another major caveat. This time in connection with the brighter pupil. In reducing the emphasis on the academic, I fear that the criteria may have gone too far. A significant number of students of French at 16 plus are going to continue their language studies to A (or AS) level and, in some cases, beyond. Their true interests lie not only in "communicative competence" but also in the ability to deal with the language in more analytical detail. The criteria give a perfunctory nod in their direction: "the stress is on communicative competence" rather than, necessarily, grammatical accuracy.

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FEATURES

INDEFATIGABLE

Hugh David visits a school that thinks it's a ship

Petty Officer Fieldhouse, R, 15-years-old and all of about 5ft 4ins was detailed to show me round. We went to the mess deck, the galley and then out past the Heads. He called me "Sir", and I in a liberal, comprehensive kind of way wrongly called him Robert. The staff and even his best friends call him Fieldhouse.

Later I met Captain Headmaster B A Youngman. "This is the only ship in the fleet where the Captain makes the tea!" he said as he filled the kettle. Boys like Fieldhouse and all the teacher-instructors call him "Sir".

In his study, the Captain explained the foundation of the 1795-a-term school which thinks it is a ship. Originally, he said, it was a ship, a 50-gun frigate named *Indefatigable* which was moored off Rock Ferry in the River Mersey. In 1864 a group of Liverpool businessmen had budgeted the Admiralty into lending them the vessel, and a £5,000 donation from the Bibby family of ship-owners (still closely associated with *Indefatigable*) had paid for its conversion into a school where Victorian high-mindedness trained the orphaned sons of seafarers as merchant seamen.

Only in 1941, when air raids on Merseyside made it necessary for the school to be evacuated, did it finally come ashore. For the past 40 years it has occupied the mansion of Plas Llanfair in Anglesey, a Victorian pile overlooking the treacherous Menai Strait. But afloat or ashore, for all of its 120-year history *Indefatigable* has never been other than a tight ship.

Beneath the once-ornate ceilings and emulsioned mouldings of Plas Llanfair, its 150 pupils live a life which contrives to combine a salty respect for the old days of sail with the more practical needs of a contemporary boarding school. They arrive at 13 and most stay for three years. "We think we give them a structured environment," said Captain Youngman. "If you take that to mean we're spartan, hard-working, tough, I'm quite happy to go along with you. We are."

Time to link up with Fieldhouse again for a second poke round, making the most of the Captain's assurance that no door would be locked and nothing hidden from view. In common with all the other boys that day - even the Chief Petty Officer (Head Boy), the other Petty Officers (prefects) and the leading hands (form captains) - the diminutive PO Fieldhouse was in "No 8s": loose blue trousers and a short-sleeved light blue shirt. A strip of tape bearing his surname, initial and roll number was stitched above the left breast pocket. I thought the outfit made him look like an inmate at an American penitentiary, something out of *The Executioner's Song*.

"Everyone says that", Fieldhouse admitted, though he and his mates all still prefer it to the "traditional bell-bottomed 'No 1s' they have to climb into for parades and special occasions. We were in a corridor and a teacher-instructor was coming the other way. He too, was in uniform: black trousers and a chunky dark blue sweater with epaulettes. Fieldhouse did not salute as the teacher passed, but tactfully flattened himself against the wall, muttering "Sir". There is no corporal punishment at *Indefatigable*, but plenty of discipline.

A bugle sounded from somewhere, marking the end of the third of the day's four periods of "instruction". Fieldhouse explained that for the next fifteen minutes it was "stand-easy". The day at *Indefatigable* was governed by these bugle calls, he said. Revellie was sounded at 7am ("oh-seven-hundred"). Thereafter, further blasts announced breakfast, commanded attendance at "Colours", when the school's Ensign was run up a mast on the parade ground, proclaimed the start of mealtimes and signalled the beginning and end of each instruction period. But playing the doleful call which meant sunset, a unilateral, *Indefatigable* sunset which happens at 16.30 in the winter and 19.30 in summer irrespective of meteorological considerations... was far from being the end of things for the day's duty bugler.

Standing at the foot of the main stairs, for a couple of hours in the evening he is ringmaster of a convoluted circus which processes every boy through supper and into bed. Captain Youngman took me to the entrance of the "ablutions block", the better to watch it happen. This was *Indefatigable* at its most structured, and he was proud of the precision of it all.

Certainly everything appeared to run like clockwork. Once they had finished supper and a spot had announced that the dormitories were open, a ragged procession of boys converged on the "Abs" from all parts of the school. Some were still in No 8s, others in jeans and tee-shirts, shorts



Captain Headmaster Youngman teaches maths



Regular parades...



...and deck scrubbing for all.

or dressing gowns. One had brought a portable cassette player and over the next 30 minutes the whole school stripped off to the strains of *Spandau Ballet* and paraded through the abs for a compulsory shower (warm, but communal), then queued, naked and dripping to be checked off by the duty master.

"They're not all angels, these boys," Captain Youngman admitted, gesturing through the billowing steam at a tangle of heads of tousled hair, flapping towels and bare buttocks. "But I'd take them anywhere. I'd take them to Buckingham Palace."

Bed first, though. In damp towel or dressing gown order the last few stragglers were padding up to the dormitories, leaving wet footprints on the stone floor. The Captain shepherded me after them. Named after now mostly-deluxed shipping lines, the dormitories were neat, functional and cold; at *Indefatigable* the central heating is confined to the ground floor. In one, a boy clad only in a tee-shirt was using the few minutes before "turn-in" (21.00hrs) to write a letter home. He stood up as we entered. Captain Youngman indicated the posters which were pinned above nearly every bed. "We let them put up pictures," he said. "Anything reasonable."

There were Falklands posters, cut-away views of tanks, pictures of motorbikes and portraits of pop stars. Prince, Michael Jackson and, most frequently, George and Andrew from *Wham* glowered or pouted in nearly every one. But, I said to the Captain, they were all male. Where were the girls pin-ups? "We let them put up what they want," he said.

By now all the bunks were occupied. "Rounds" were imminent. "Watch this bit, it might amuse you," said Captain Youngman as the bugle squawked right outside the door. Almost before

he had finished speaking another voice yelled: "Bibby hot!". Immediately, every boy tensed rigid in bed, literally lying to attention with his arms outside the blankets. Preceded by an officious leading hand - "Bibby ready for inspection, sir!" - the duty master entered, looked briefly around and said good night. "Good night, sir," the boys chorused, lying easy only as he left the room.

"Know why we do that?" asked Captain Youngman with a smile. I thought of that scene in Barry Hines's *Kes* where young Billy Caspar is woken by his elder brother's shout of "Hands off cocks, on socks!" but I said nothing. "Pure bull!" the Captain said. "They love it."

Later, with the lights out upstairs ("We do occasionally get pillow fights and dormitory raids, but not often") we retired to the staffroom and another cup of the Captain's strong, sweet tea. Old copies of *The TES*, the *Daily Mirror* and *The Seaman* littered the table. Naval cups hung on a line of hooks by the door.

"I won't deny we're going through a difficult time at the moment," said Captain Youngman. "When I came here in the early seventies boys only stayed for one year. They came for nautical training, and they came after they'd left their ordinary schools. Then, with the raising of the leaving age, my brief was to introduce education as well as training."

That meant - as it still means - CSEs, O levels, and a broadening of the curriculum so that now, although seamanship, games and PE still dominate things, all the boys also take English, maths, physics, history, geography and TD.

"We haven't got a sixth-form so by and large we don't get the brightest boys here," the Captain went on. "But we've always had a good number of lads from Service families. There are 63 at present, the sons of NCOs and Warrant Officers

typically; and I'm sure it's not so much the academic side of things which attracts them. It's the discipline, the traditions we've got and which other schools just can't provide.

"Competition's out of fashion now, isn't it? Here we still think it's terribly important. We have four houses - Drake, Raleigh, Rodney and Hood - and everything is run on a competitive basis. One other thing: I expect you've noticed we don't employ domestic staff. Every week we have one class on special duties who clean out the head (lavatories) sweep up, peel the spuds; all that sort of thing. We think that's very important, too."

The difficulties the Captain had referred to remain, however. Recent circumstances have cast *Indefatigable* in the same boat as Britain when Dean Acheson remarked that "we had lost an empire and yet not found a role." "Up till about 1964 we could more or less guarantee any boy leaving here a place in the Merchant Navy. There was such a thing then, and 'Inde boys' were snapped up as deck and galley boys," the Captain said. Figures in the school's annual report bore him out: of a total of 15,437 boys who had passed through *Indefatigable* since its establishment in 1864, no fewer than 12,169 entered either the Royal or Merchant Navy.

"Now, though," "well, what school can guarantee its pupils anything? We'll be lucky if one lad gets into the merchant fleet. All the others will be out on their own, fighting like everyone else - though I hope, because of what *Indefatigable*'s given them, they'll be slightly better placed. I mean, look at young Fieldhouse. What's he going to do?"

Just before leaving, I asked him. On September 4 he is entering the Royal Corps of Signals. "Joining the Army," he added, "unaware of what a supreme final irony."

FEATURES

THE CHILD POVERTY TRAP



Growing shortages

Every sixth child in school today is receiving a free lunch and since the Government clampdown on official statistics, that is probably the best available, up-to-date indicator of the extent of child poverty. In some parts of the country, however, that average is a serious underestimate.

In Scunthorpe in the north-east, for example, where the major steel-based industries have collapsed, there is a 24 per cent take-up of free school meals.

In the 50-mile hinterland, the figure is 19 per cent, corresponding to the general level of unemployment and in particular schools, like Westcliffe Infants in Scunthorpe, over 60 per cent of the school lunches are free – a proportion that has more than doubled since 1980.

The Inner London Education Authority's recent report *Children In Need* stated that 40 per cent of the capital's secondary school children are entitled to receive free meals. In some areas as many as two-thirds of the pupils in primary schools qualify. The figures closely follow parental unemployment figures and may suggest that young parents with children in primary schools are being most badly hit by

A study of unemployment in parts of London, in Ulster, where 97 per cent of the male workforce had been on the dole for over six months, found that 9 per cent of the families had kept their children away from school on occasions because they lacked adequate footwear or clothing. Nearly half said their children couldn't go on school outings because of the costs. One in five children often missed proper meals.

A survey of 900 eight-year-old children in South Wales reported in *The Lancet* last September showed that most free meals were provided to children who are shorter than average.

This followed a study of 10,000 children reported in *The Lancet* in 1979 which found that those who had free meals were significantly shorter than those who paid or did not take school meals. It concluded that a large proportion of these children "were of lower nutritional status" and that "withdrawal (of free meals) might prejudice their future development".

Bristol University's Department of Child Health reported in 1982 (*Child Health and Education in the Seventies*) that in a survey of 15,000 children, more than one in five 10-year-olds went to school without breakfast.

Low income families almost doubled in the first two years of Mrs Thatcher's Government and now more than one child in six receives free school meals – nearly twice as many as in 1980. Howard Sharron reports on the families with children who have replaced the elderly as the poorest group in Britain today.

"The problem of non-attendance is partly due to Mrs S's financial difficulties in providing the obligatory school uniform."

"Mrs P does get school maintenance grant for the two older children. However, she needs clothing for the youngest. At present she has been unable to go to school because she has insufficient winter clothing."

"The material standards are very poor in this family. T (15 years old) is not too badly provided for because she earns money by doing a paper round which she spends on her clothes. P and A turn up in school in dirty and smelly clothes because they only have one set."

These cases referred by education social workers to the charitable Family Welfare Association provide a glimpse of the poverty – much of it unnoticed and unremedied – of many families with children at school.

Between 1980 and 1983, the number of families applying for clothing grants to the FWA rose by 400 per cent. Yet between 1979 and 1982 the number of Department of Health and Social Security single payments (formerly one-off Emergency Needs Payments, which also cover furniture and food, as well as clothing and footwear) fell from 360,000 to approximately 70,000. The fall is particularly startling because during the same period the number of people claiming supplementary benefits leapt from 4.4 million to 7 million.

The 1980 Social Security Act reduced the discretion of DHSS officers over one-off payments. Strict rules now ensure that it is no longer possible to claim if your children had simply worn or outgrown their clothes: it had to be proved that a clothing or footwear payment was the "only means by which serious damage or serious risk to the health or safety of any member of the assessment unit may be prevented."

Needless to say, it became exceptionally hard to get a payment for clothing or footwear. In 1981, only 5,000 such payments were made to "assessment units" in need, while in 1982 it rose to 6,000. Clothing grants are just one example of the way Government policies have penalized families with children, who, because of the recession, gaps and cuts in benefits and the poverty trap, have now taken over from the elderly as the most vulnerable section of our society.

"The shift in the burden of poverty to families with children has been most noticeable in the case of those living below the Supplementary Benefit level – usually those on very low pay, or the unemployed who are not taking up their SB entitlement," explained Ruth Lister, director of Child Poverty Action.

"Between 1979 and 1981 the numbers of all those below the SB poverty line increased by 24 per cent. But this masked an increase of 68 per cent in those who were also below pensionable age and, alarmingly, a 90 per cent increase in the numbers of children living below the poverty line. Although there was still widespread pensioner poverty more occupational pensions and improvements in state pensions has lifted a considerable number of over 60s above the poverty line."

The unlucky children who have fallen into official penury do not come mostly from large families, as popular mythology suggests. In 7 out of 10 families with children living on low incomes, including those living below Supplementary Benefit levels, there were only one or two children, added Ruth Lister. The biggest group out of the 907,000 families raising children on the poverty line was one-parent families, of which there were 441,000.

According to the 1981 DHSS figures, a quarter of all children (3.7 million) were living on low incomes – officially this is up to 40 per cent more than the Supplementary Benefit level; 1.7 million children were living on or below the SB poverty line while those below total more than half a million.

Unemployment is obviously one of the key factors in dragging so many families with children into poverty. And once down, public policy has tended to put the boot in.

The earnings related supplement to unemployment and other national insurance benefits – like the child dependency additions – was abolished, hitting the short term unemployed very hard.

The long-term unemployed lose their entitlement to unemployment benefit after a year and then must claim Supplementary Benefit. But they are the only group of claimants who can never get the long-term rate of supplementary benefit. Couples can lose up to £11.05 a week compared

other long term claimants because of this discriminatory bar.

But you don't have to be out of work to be poor. Contrary to what the anti-scrumper campaigns suggest, it is those who are in work that form the largest category of those on low incomes and those below the SB poverty line. More than half the children living below the poverty line were in families where at least one member was in work in 1981.

A couple with two children under 11 years receive Supplementary Benefit of £64.75 a week (plus housing costs and some extras like heating if the child is under five). The low paid, one-parent families are paid much less. The long-term rate of Supplementary Benefit for one-parent families is £35.70 a week plus £9.60 for a child under 11 and £14.35 for a child between 11 and 15. The short term rate is a miserly £28.05.

The low-paid group is entitled to Family Income Supplement to bring them up to poverty-line levels but, even more than other means test benefits, FIS is under-claimed. It has an estimated take-up rate of only 51 per cent. And even then the Government is likely to take away more than it gives by taxing even this very low income. Over four-fifths of those who claim FIS also pay income tax.

Families with children have steadily lost money since the war. According to the CPAQ, standard tax-paying families received more financial help through tax allowances and family allowances in 1955 than they do now through the child-benefit which replaced them. The real level of tax-free income enjoyed by families with children has fallen since 1950. For the childless, it has risen.

Current poverty figures are all based on 1981 DHSS statistics. Nothing more up to date has been issued by the Government because of the cuts in information collection and publication. It is difficult, therefore, to assess how things have moved since then, though figures for free school meals give some indication of the trend.

In 1979 11.9 per cent of all children in school received school meals free and 52.2 per cent paid for them. After the 1980 Education Act the Government restricted eligibility to families on FIS and Supplementary Benefit. It gave local authorities discretion to supply free meals to low income families above these levels, which previously had them of right, and the figures went down from 11.9 per cent to 9.9 per cent in 1980. The number that paid also dropped from 52 per cent to 38 per cent.

A year later, 27 per cent of all l.e.s.s. had taken advantage of the discretionary powers to refuse meals to low income families who did not meet the FIS or SB minimum requirements. But by then the recession was beginning to bite and the proportion of children receiving free school meals in 1981 increased to 11.9 per cent again, while those paying continued to drop.

By 1984 the total paying for meals had dropped further. But the number of children receiving free school meals had risen to 17.4 per cent – one in six of all children. This approximates to the proportion of school age children on or below the SB poverty line, so it could be argued that, had the rules for eligibility not changed, 25 per cent of children – the same number considered to be from low income families generally – would now be claiming free school meals; one quarter of all British school children.

Material hardship is also having a major effect on children at the upper end of the age spectrum: 16-year-olds who leave school early because their families cannot support them. The YTS payment of £25 a week offers irresistible inducement to many to quit the classroom.

Local authorities' discretionary EMA's and minor awards are few and far between and average only £5.25 a week. Some authorities have even cut these altogether. Little surprise, then, that children from low income families are less likely to stay on at school after the fifth form. As the former junior education minister, William Shelton, said in 1981 the Government is "almost bribing" the poor to leave school early.

In 1982, however, Sir Keith Joseph was reported as saying: "The Government would be very reluctant to involve the taxpayer in any extra cost. There are no plans to pay children grants nor are there likely to be."

Last year the consequences of this policy in these times became clear: the long term trend of rising proportion of children staying on at school compared to those leaving at 16, was reversed. In



Kathleen Murphy

Mrs Kathleen Murphy, 61, chose to look after the child of her eldest son rather than see him stay in care and be put up for adoption. John is now nine years old and she has looked after him on social security since he was 18 months.

Her income is £47.90 a week but she finds it impossible to cope on that and is deeply in debt to the electricity board, which has repeatedly threatened to cut her off. Because her house is heated by electricity, her last bill was for £220, plus £100 arrears.

At the last moment the social services stepped in with some money to save her from being cut-off but she must still pay £50 a month on an instalment payment scheme.

She says she is caught in a trap. She can't afford to install gas fires; the electricity board will not install a meter because of her arrears; the DHSS will not allow her to have money directly debited because she receives so little from supplementary benefit (most of her money is a widow's pension and she receives only £5.22 supplementary benefit); and John suffers from arthritis and so needs the fire on constantly.

Even so, no fires are ever put on in the upstairs of their very cold inter-war council house in Birmingham's Sheldon district. Mrs Murphy has been told that she cannot claim One Parent Families Benefit because she is a grandparent, and the DHSS recently refused an application for bed linen because it was not considered necessary to prevent serious risk or injury.

Mrs Murphy spends £12 to £14 a week on food



Ray Collins

FEATURES

Pauline George

Pauline George, a 35-year-old single mother from the Kings Norton area of Birmingham has looked after her 5-year-old son David since he was 18 months old. She receives a total amount from social security of £69.32 a week – but this is deceptive.

When her husband left she kept their small two bedroomed flat and the mortgage costs £32.50 a week. Another £15 a week is put aside to pay for bills – leaving some £17 a week to feed and clothe her and her son.

"I don't have any HP, I never buy new clothes, I never go out, I don't drink and I don't smoke. I am finding it very difficult to manage", she says. "Last week David came home from school and told me that the cost of his orange juice and biscuit had doubled from 10p a day to 20p a day. It was a terrible shock – I just can't afford a £1 a week on this sort of thing. There is such a big gulf between people who work and people like me that they just can't believe these pennies can be so important to anyone."

She added: "My son has school dinners and I probably shouldn't use it as a main meal because the nutritional value is not good enough but I have to because I can't afford meat and two veg. David gets egg or beans on toast in the evening, or something grilled because I don't like to use the oven. I haven't bought a roast for as long as I can

remember. During the holidays I have to provide him with an extra meal. It's bad enough over the Easter holidays but during the summer it is a nightmare."

Pauline George relies on friends for second-hand clothes for David and the single parents' self-help group, Gingerbread, for her own clothes. She bought a skirt last week for 15p. "Luckily when my husband and I broke up I had a lot of good clothes and I have kept good care of them."

David is aware that the family has very little money, she says. "Although he asks for sweets and toys, he never complains when he is told 'no'. I can't buy him books and he only gets them as presents on his birthday or at Christmas."

"I have managed to save 50p a week to send him to a school trip to a nature centre but longer school outings, more than a day out, I could never afford."

One of the worst times was last winter when she could not afford to pay for a pair of wellingtons for David. "If a relative had not come forward and bought a pair he would have continued to slush around in shoes during that bad weather," she says.

If she ever received more money from the social security she would spend it on just living better. Buying better food and clothes. Others she knows are even worse off. "At least I was left with a good home and a fridge and a cooker and I didn't have to start from scratch. I was lucky."



Ray Collins

Last July Ray Collins's wife died, leaving him to bring up his two children, Maria aged 12, and Miguel, 6. He quit as a driver with a Warley-based firm in the West Midlands, where he averaged £130 a week, and was forced to survive on a grand total of £54 a week, excluding housing benefits.

He has been told that, because he is a man, he is ineligible for the special widowed mother allowance, and is still on the short term supplementary benefit rate. At first he used his savings to take the children out, to get their minds off their mother, but when the money ran out they came down to earth with a bump.

Now, if his eldest daughter wants to go out with friends he often has to tell her that he can't give her any money. He puts his £13.70 child benefit away every week to pay for bills and spends the remaining £40 on food and clothes. "Without help from relatives, I would collapse", he says.

"I have been out in the evening three times since Christmas; staying in all the time can be very depressing because I used to like to go out and have a drink with friends."

Heating the house is one of his biggest worries. His last gas bill was £66, of which he was given a £1.74 allowance from the DHSS. He managed to pay it shortly before he was cut off. "After the children are in bed all the fires in the house go off immediately."

His other headache is washing all the children's clothes. He has to do this by hand because his washing machine broke down. He asked the DHSS for money for a second-hand washing machine but they turned him down.

The school holidays were also a great burden because it meant cooking extra meals, and the teachers' dispute meant he was having to give the children money for makeshift snacks and still cook a proper meal in the evening.

"Living on social security really drags you down to the depths. You don't live, you just survive and become devious at muddling through."

Review

THEATRE FILMS TELEVISION
BOOKS BOOKS BOOKS
ART MUSIC THE

Forty years on, the Second World War is alive and well and flourishing in children's fiction. This is not a phenomenon confined to the written word alone. One film critic believes that if all the films made about the war were to be shown consecutively, their running time would probably exceed that of the war itself. If it had profound and far-reaching effects on people then, it continues to have a powerful hold on the collective consciousness now. It is an irony that more recent and equally destructive conflicts, such as Vietnam, or the Idi Amin regime, figure much less in popular reading fiction, and certainly not at all in "popular" reading material such as the war comics.

According to John Dunne, Divisional Coordinator of the West Schools Library Service, war is one of the few fiction areas that has an attraction for boys, who tend to read less. In schools the Second World War is much more approachable in the teaching of history: it is nearer to the students' experience. Stories of evacuee children, their coping with the loss of the secure and familiar have an immediate appeal, as one can see from the popularity of *Carrie's War*, by Nina Bawden (Puffin). But, says Mr Dunne, children, though conservative and traditional in their choice of reading matter, can appreciate that, unlike other popular fiction, "there aren't any pat endings, that there is an element of doubt," and it may well be questioning something one has always assumed was right.

War provides the ready-made elements of danger and adventure that hold a child's interest. "It is such good copy," said the head of a middle school in Warwickshire. Sales in his school bookshop show that pupils feed off the media and read titles that are serialized on television. *Carrie's War* was popular as is *The Machine Gunners* by Robert Westall (Puffin), also made into a television series. The latter is frequently used as a text to discuss issues about war and many children will identify with it because it is realistic and "up front". Set in Tyneside during the bombing raids and winter of 1940-41, the novel is about a gang of boys, and the statutory tomboyish girl, who acquire a machine gun off a crashed German aircraft, build a hideout, encounter a wounded German pilot, and set off a bizarre chain of events.

But there is a sub-stratum of fiction that is even more widely read - the war comic. This is the staple diet of many boys less adept at reading. There are no nuances here; they perpetuate British superiority. "His name was Mbulu. He came from an African tribe... he was wounded from his village... so he joined the British Army to learn the secret of the white man's magic - the power they had to vanquish their enemies." ("White Man's Magic" - *Commando: War Stories in Pictures*).

Because the British were on the "right side" it is that much more difficult to question the ravages of war. History has made Germany almost a folk enemy for the British, very much as the French were earlier. And the unceasing devotion of the television screen to this war has created a kind of sweeping awareness of events in youngsters. This is the common ground the author can rely on, on the one hand, and on the other has to contend with.

But these readers do appreciate the moral dilemmas created by war, says Ian Needle who wrote the television play *A Game of Soldiers* (Andre Deutsch/Fontana Lions and serialized for the Middle English programme) just after the Falklands War. It was criticized by Defence officials, but many children were immensely moved by it and remember it still today. However, says Needle, "the play was not specifically about the Falklands. Uppermost in my mind was to try to convey to children, through drama and then through the novel, the fact that there is nothing like a simple war."

Set on a bleak windswept island being battled over, Needle tells the story of three children who alleviate the boredom of wartime by playing war games. They get caught up in it for real when they come upon a wounded enemy soldier. Their firm nationalistic beliefs are shattered when they slowly come to realize that the pathetic soldier is a human being. Three very different children (one of whom is clearly ready to kill) move from initial hysteria to compassion, a compassion that is impotent in the face of force and authority. Needle says he believes children like a powerful story and he uses this to make an emotional impact so that "they are overwhelmed and then go through a learning process. I hope that from the story they will extrapolate certain moral messages".

It is here that we can make some distinctions in the genre of war fiction. The formula is similar to that of other writing for children - a strong plot,



Playing soldiers

Uma Ram Nath on the continuing popularity of war in children's fiction

usually a gang of children, outwitting the adults or those who wield power. In addition, war allows greater excitement: building a hide-out, clandestine activity, encountering an enemy soldier or befriending people believed to be enemies. From then on fiction flows into two separate streams: the pure adventure story which reflects the violence of war and the novel that raises questions, if not about the causes of war then the consequences of it. The strength of the characters may swing the balance.

A Game of Soldiers and the *The Machine Gunners* share the formula elements. But the latter remains an adventure story, it does not ask enough questions. The final chapters verge on black comedy with various misguided forces trying to demolish a non-existent invasion; the realism so attractive to the reader acquires a frenetic quality and diminishes the impact of the book. It is what happens, and not why it happens, that remains the interest of the book.

The anticipation of fear can be the sustaining element in children's war fiction. In Susan Cooper's *Dawn of Fear* (Chatto & Windus) it provides a kind of resonant background. Here too the children build a camp, but one without any warlike intentions. The German planes fly over their homes on their way to bomb London and the children view them initially with only passing interest. As the raids grow more frequent and more severe, Derek becomes increasingly aware of his parents' apprehension. But it isn't bombs that destroyed the camp that he, Peter and Geoff have so painstakingly built. It is the violence of a gang of boys from across the road. Then Peter's house is hit in a bombing raid, and the boys understand loss and the latent violence in human beings.

It is this movement towards understanding that distinguishes one of the most widely read of novels - *The Dolphin Crossing* by Jill Paton

Walsh (Puffin) - in which two young lads sail out to help in the rescue of British soldiers at Dunkirk. There are several absorbing levels to the book. John Aston and Pat Riley are classes apart socially, the latter being a working-class evacuee. John has an older brother who is a conscientious objector. In their backbreaking rescue journeys John begins to feel a wave of anger against the German pilots. Then he realized that "our own pilots would do the same if the positions of the two armies were reversed. And it struck him suddenly that it was this sort of thing which Andrew had refused to do". While Pat decides to go off on yet another mission on his own and does not return, many readers still, despite the author's intentions, see the heroic aspects of the voyage of *The Dolphin* as being paramount.

Herosim is double-edged, born out of the instinct for survival. Some of the most widely read novels are those that draw on the "children alone" theme, surviving the Blitz or in Europe. *The Silver Sword* by Ian Serailier (Puffin), first published about 20 years ago is still, according to booksellers, one of the most popular. Three children start out from occupied Poland in search of their parents who are believed to be in Switzerland. Along the way they befriend another child and the four survive by sheer determination and wit. In Judith Kerr's *When Hitler Stole Pink Rabbit* (Fontana Lions), a book much enjoyed by younger girls, Anna and her Jewish family flee Germany to become wandering refugees.

There are more sombre books about enduring Nazi rule. While *The Diary of Anne Frank* is used in many schools, the European perspective is put across in another autobiography, *Mischling*, *Second Degree*, by Ilse Koehn (Puffin Plus). The title is the Nazi classification of a child with one Jewish grandparent; Ilse Koehn did not know till

the age of 15 that one of her grandmothers was Jewish. In 1937 when she was eight years old, her parents were divorced, and their daughter could never understand why it happened. It was to protect her that her maternal grandparents engineered the divorce.

There is a clearly drawn anguish in Ilse's accounts of the conflict between her father's free-thinking beliefs and what was happening in Germany. And it becomes even more acute when, in an evacuation camp, being nurtured to become a leader of the Hitler Youth Movement she remembers her father saying "... promise me one thing... never, never become a leader, do not accept any official status".

One must not forget, however, that young people read to be entertained. But if the writer has the craft to construct a novel so that it conveys social and moral ideas, the readers will grasp these complex themes without their being seen to be didactic. In his analysis of children's fiction, *Reading and Righting* (Collins), Bob Leeson says, "Morality in a story does not speak simply from the mouths of characters, not in the introspective examination of their souls. It is in the spirit of the book itself and shows in the shape of the story, its choices, its changes and conclusions". Political conflict does not lend itself easily to such treatment but Joan Lingard's novels set in Northern Ireland do explore this no-man's land where strongly held beliefs and notions of right and wrong cause so much pain. Intended for the older reader, the romantic theme does sustain interest in the series with the central Catholic Kevin and Protestant Sadie, but the novels are strong on narrative and do question the causes of violence.

The Lingard novels are among the few about contemporary political conflict available for the teenage reader in England today. Despite widespread media coverage of other wars, there is only a handful of books to show children in other settings. On the other hand television has given the possible nuclear war a horrifying immediacy. Not long ago, when Raymond Briggs' *When the Wind Blows* (Hamish Hamilton) was given *The Other Award* there was much debate on whether such books were suitable for children. The children themselves were not daunted and confirmed Briggs' belief that he is creating books that have a wide appeal, despite the fact as he says, "in England the strip cartoon is deemed low class culturally".

What is so terrifying in all the books on nuclear war is that there is no physical adversary. The most powerful of novels so far is Robert Swindell's *Brother in the Land* (Oxford University Press) which was commended by the Other Award panel and has just won the Children's Book Award (organized by the Federation of Children's Book Groups). The narrator is a young boy who, along with his brother and father, survives a nuclear explosion. The aftermath shows the most vicious aspects of authority in practice. There is a cold and desolate edge to the writing, even in its happiest moments. Danny records it all - the poisoning of the demented, the Black Rain, the misspoken babies. "What I did was, I started to write down everything that happened after the nukes. I thought that some day, a long time from now, somebody might find it and read how it was and maybe it would stop them doing it again."

The same hope is expressed in Louise Lawrence's *Children of the Dust* (Bodley Head). A trilogy of connected stories, it moves from a nuclear winter to a rebirth of a society of peaceful mutants. But the most telling episode is the first, as young Sarah tries to protect her sister Catherine from contamination, seeing in her the hope for future generations. Thereafter the book takes on the dimensions of science fiction which dispates its impact.

Perhaps the most difficult aspect of assessing the impact of war fiction is how the readers themselves respond to it. War provides fertile ground for storytelling which could be exploited to great effect and used for just that end as an exciting setting for adventure. On the other hand the narrative could lead to nudging the reader into thought - into examining chauvinism or the nature of power. Second, while no one would wish to forget the atrocities of 40 years ago, we need to bring children forward, to look at the human situation today. For the teenager in England, Northern Ireland is still across the sea, but there are parallels to be drawn in Lebanon. If 12-year-olds respond to the plight of Jewish children under Nazi rule, surely they will understand what it is to grow up in Soweto? Perhaps we do young people an injustice in the limited range of books available on the subject of adult conflict today.

A shockproof historian

Edward Blishen on Richard Cobb

A Classical Education. By Richard Cobb. Chatto £9.95. 0 7011 2931 0.
Still Life. By Richard Cobb. Hogarth Press £3.95. 0 7012 1920 3.

Still Life, his account of growing up in Tunbridge Wells, was a demonstration of Richard Cobb's great cunning as a storyteller. The opening was memorable, though the matter it handled was largely that of the guide books: he converged topographically on Tunbridge Wells from various directions, and in doing so not only planted hints of the story to come, but made the reader's penetration of that southern spa seem as thrilling as - by the end of Act I Scene 1 - the entry of Macbeth is made to seem. It is why Cobb is such an exciting historian: from angles that at first appear strange, he marches (or slides) upon and surrounds his story. He is frank about the element of "fictional intervention" involved; but then, clearly, none of us is capable of untingered non-fiction. In any case, truth partly consists of the question-marks that accompany any attempt to state it. Here is a writer who can make arresting use even of the doubtful elements in his story.

This sequel is ostensibly the tale of his education, at Shrewsbury and Oxford. In fact, it is such a tale, but embedded in a story not so remote in blood and horror from *Macbeth* itself. The education is classical, in the studious sense, but classical also in the sense that suggests an appalled and screaming chorus. Characteristically, the telling takes a teasing form. In the spring of 1950, in Paris, he is reunited with a schoolfriend. It becomes clear that Edward has been in some kind of prison, unable for many years to vary

his view of the world: he is now intoxicated by the possibility of turning any corner and finding that the scene changes. There is a beautifully written passage (distinctly Proustian, I note as one of those Professor Cobb sought to engage with his pronouncement on that Booker Prize occasion), in which the author imagines what it must be like to be so confined, and afterwards so free.

Then the story is tantalizingly peeled skin by awful skin. It begins at Shrewsbury, where Cobb finds himself in the most philistine house in the school and joined forces with Edward to mock and discomfort a bullying establishment. It seems clear that, for Edward, scorn and contempt arose out of a barely articulated natural tendency to rage. Cobb was infinitely cooler. Always candid (part of the pleasure of reading him rests on his dependable honesty: he seems little moved by the desire to appear well in the reader's eye), he confesses: "I tended to see Edward as an instrument of my own amusement." In Dublin, where he begins a holiday with Edward and his mother, the amusement turns dangerous. After the young Cobb has been persuaded to attempt a burglary, the mother (separated from her husband, known to them as Moloch, she herself being known appallingly as Medea), attacks her son with everything that's to hand, beginning with a teapot full of scalding tea. Cobb is sent home in disgrace, blamed for Edward's behaviour. For Medea he now becomes an object of revenge. Only the worldly wisdom of the headmaster of Shrewsbury saves him from a suit for libel; and when he is ready for university, he finds that Edward's mother has written warningly about him to every college in Oxford and Cambridge. (Her letter,

in that it made him sound interesting, secures him a place at Merton.)

All this as a preface to the moment when Edward actually, hideously, slaughters his mother with an axe. Cobb is fortunate in being able to show that at the hour of the murder he was himself with his tutor. It is why, he says, he has always advised his pupils never to miss a tutorial.

He says he does not mean to go over the horrifying circumstances of the murder, but does so. At the end he wonders at the ordinariness out of which it sprang. But then, he reflects, why should a convicted matricide, and however Wagnerian a mother, *not* be ordinary? It is his shockproof histo-

God Knows. By Joseph Heller. Jonathan Cape £8.95. 0 224 02288 1

"The kid, they say, was born in a manger, but frankly I have my doubts."

Each of Joseph Heller's novels began, so he maintains, with just such an isolated line or phrase. A verbal germ suggests echoes, responses, a tone of voice or a setting, and only then a character acted a story that unfolds towards its climactic scene and towards a closing line that, similarly, emerges out of nowhere.

Catch-22 immediately declares itself to its author as a novel. It began with a line: "It was love at first sight. The first time he saw the chaplain, Someone fell madly in love with him". Heller wasn't clear to begin with what kind of chaplain he had conjured up or who "Someone" was. Yet, though it took a further year to block out the paranoid World War Two bomber who became the book's hero, everything was there in that opening line and in Yossarian's situation, afraid of being blown to bits, out of sympathy with war and (in keeping with the Hemingway spirit) with all the clichés of glory, homeland, honour and pride being led to him. But in love all the same. *Catch-22* is not a war book in the normal sense. It becomes a fable on Yossarian's hopeless love, a book of hopeless loves.

Catch-22 is one of the certain masterpieces of the century, an unquestionably great book, now officially canonized by its appearance on the A level syllabus. It looks at its subject without disgust, even when the subject seems loathsome, and without moralizing, even when the situation seems to scream for a moral. At the climax Yossarian reads in the split guts of a fellow flyer the book's one great message: that death cannot be evaded and that there are far worse and more insidious deaths than those of steel and flame.

Catch-22 was published in 1961. It took Heller another 23 years to finish his second novel. *Something Happened* traces the slow death of the postwar years, an aimless, claustrophobic struggle for self-respect and identity. The fearsome, illogical power-ladder of the army re-emerges, strip-



Heller's catch

ped of humour or the dignity of exaggeration. In Bob Slocum's post-war world, "in the office in which I work, there are four people of whom I am afraid. Each of these four people is afraid of five people."

Heller ultimately saved this line for later in his book, opening with the oddly chilling "I get the willies when I see closed doors". *Catch-22* tended to disappear behind its title and that Red Queen logic - the "Catch-22" situation - beloved of football managers and union presidents; *Something Happened* was unfairly little regarded, understood and appreciated only slowly. It is still an unbearable book to read... cold, austere, and uninflected.

Almost nothing does happen. The "something" that does is again the death of innocence, this time Slocum's son, not killed outright in the road accident that prompts the ghastly shout of the title, but asphyxiated in his father's panic-stricken hug. Killed by love.

Good as Gold took the critics by surprise. Heller's track record had suggested another book needn't be expected until around 1997. When it came, only five years after *Something Happened*, it was, equally unexpectedly, a rather mild Watergate satire, too consciously "satirical" to score real points, justified only by a few good jokes significant in retrospect, largely

for the interest it signalled in Heller's own Jewishness, something he had left aside in the earlier books.

Heller made no progress with his one-liner about the Nativity. For his latest novel, though, he moves 28 generations back up the bloodline - 28 "beats" in *Mathew* - to its source, King David himself, on his deathbed, impotent, cynical and tired, but full of wisecracking, debunking self-satisfaction: "I don't like to boast I honestly think I've got the best story in the Bible. Who'd argue? The killer of Goliath, the Adullamite rebel, the Psalmist, Michelangelo's ideal of manhood (though inexplicitly uncircumcised), marriage to Bathsheba, in old age the not altogether successful but still decidedly interesting erotic services of Abishag the Shunammite, the low-down on Moses (a querulous stammerer), Saul (a paranoid), even Solomon (thick: really meant to save the kid in hell).

Heller presents a David who is both antique and contemporary, whose empire is the size of Maine, whose Star is devised in London, England, 1898, whose God may be dead but has a lousy sense of humour anyway; owing something to Mel Brooks, and a great deal to the *Oxford Dictionary of Quotations*. Both the early novels were concerned with vast inhuman structures that sought to determine every detail of life, caricature every loose end of free will; stylistically, they were obsessed with *déjà vu*, repetition, prescience, the key devices in David's bravura performance. In *God Knows*, the sense of inevitability reaches an ironic peak. David confronts a presence for whom, if he still exists, everything is preordained. David's plans are weighed on by future as well as past. These might be death camps, even Nazis, God knows.

As Thomas Mann saw, the Jewish people are trapped between history and God-story, between contingency and destiny, both of them fatal. Heller leaves one last hope, that of the human voice, the storyteller, standup stuff, black and sick, but hope as long as it lasts. For history, whether it be that of armies or corporations or the Lord of Hosts, does one thing only: it takes your life away.

Brian Morton

This is the BBC

The BBC: the First Fifty Years. By Asa Briggs. Oxford University Press £17.50. 0 19 212971 6.

A couple of weeks before Christmas in 1922 a six-foot-six Scot called John Reith was appointed General Manager of a brand new organization called the British Broadcasting Company. On his first day in his London office he was stopped by the liftman and asked what his business was before being allowed into the lift. He was one of four employees of the new BBC, he announced, but the liftman was unimpressed. "Nobody there yet, sir," he replied, "but we're expecting them on Monday for the first time."

It is difficult to imagine the tiny BBC with its tens of thousands of employees, worldwide reputation, and vast output of local, national and international radio and television, could have had such modest beginnings. The early years of the Company that became a Corporation are among the most fascinating in Asa Briggs' history of the BBC from 1922 to 1972, and I am delighted that what has previously been a momentous four-volume opus is now available in a freshly written, not merely condensed, single volume.

Inevitably, the figure of Reith dominates the story, and even today BBC people still speculate about what Reith would have thought about this or that development. Nor is it only the whiff of the Glasgow man which still pervades the air at the BBC, albeit faintly, for Briggs describes graphically the early buccannery style, some of which persists today. Reith converted the then Archbishop of Canterbury to the BBC cause by demonstrating wireless personally to him at his home. When the Archbishop asked if a piano solo was ever broadcast Reith rang up the BBC and ordered one to be put on specially that evening.

Two great events stand out in this latest volume, the General Strike and the 1953 Coronation. The first of these established radio as a national institution. Reith himself interrupted a programme of dance music to announce the strike had begun, and he it was who told the whole country of its end. The Coronation did exactly the same for television, as the nation collected around its relatively few television sets and realized some of the awesome potential of the medium.

Briggs devotes a substantial section of his 400-page account to the coverage of the Second World War. It was a watershed for the BBC in many respects. First of all it tested the notion of independence, and BBC Governors were peeved to discover that Reith had done a secret deal some years earlier to hand over effective control to a Ministry of Information, though this never actually happened. In the event, despite censorship and concern about the effects of broadcasting, the BBC established itself, especially through its eye-witness reports, as a fearless source of information. With a national audience whose appetite for both news and light relief was voracious, it also used the opportunity to expand its hours of music, comedy, plays and talks.

Much of the second half of Briggs' history is about the rapid spread of television during the 1950s and 1960s and the effects of competition from the Independent Broadcasting Companies. It is often forgotten in the present anguish about ratings, when the BBC is flogged for attracting a little less than half the television audience, that ITV snatched about 70 per cent when it was first established and the BBC had to claw its way back.

Though the torrent of names, programmes and issues flash past at a rapid rate, this one-volume history of the BBC is a very good read. It is authoritative as well as thorough, and shows that arguments about the licence fee, interference from politicians, and accusations of bias are nothing new.

E C Wrang



A thoroughly decent chap

Sheila MacLeod on Sassoon in mid-life

Siegfried Sassoon. Diaries: 1923-1925. Edited and introduced by Rupert Hart-Davis. Faber £12.95, 0 571 13322 3.

Although he and the Faber blur-writer would both object, Siegfried Sassoon is chiefly remembered today as a poet of the 1914-18 War. If the poems included in this volume of his Diaries are anything to go by, that reputation is not altogether undeserved. Occasionally they attain some level of poetic condensation or intensity, but in the main the poetry is conventional Georgian stuff hampered alike by the demands of iambs and of rhyme. Thoroughly decent stuff, of course. But then Sassoon was a thoroughly decent fellow.

These are not the original diaries but versions edited by Sassoon himself some 10 years later and from which all references to "affairs of the heart" have been removed. Or so the introduction claims, causing a sinking of the very same organ in avid diary-readers like myself. After all, what we want from diaries is intimate self-revelation — or, at least, the illusion of it. However, the claim made in the introduction is not entirely accurate. And there are many compensations, not least the intimate glimpses into the lives of Sassoon's large circle of literary friends and acquaintances.

When this volume begins Sassoon is 37 and the modernist, successful author of four books of poetry. He is on sufficiently friendly terms with Tho-

mas Hardy to be a frequent visitor at Max Gate, and on one occasion witnesses what must have been an extraordinary meeting between the grand old man and T. E. Lawrence. Robert Graves, Edmund Gosse, Edmund Blunden and E. M. Forster are all close friends as well as the elusive Ralph Hodgson whose conversation must have been among the best on contemporary offer and who should surely be remembered for more than his little poem about cruelty to animals. H. G. Wells, Arnold Bennett, Osbert Sitwell, Woolf and Morris are among his recurring acquaintances as well as a host of more fashionable (and less memorable) people. All in all, he seems to have known anyone who was anyone and to be leading a varied and stimulating life, going to concerts, the opera, house parties, country weekends and the occasional trip to the South of France, always in congenial company.

But it is clear that Sassoon is not a happy man in 1923 and is drifting. Disdaining property and possession, he lives in rented rooms belonging to the Australian writer W. J. Turner and his long-suffering wife Delphine, with only his books, his piano and some sheet music. Often he lurches or dines alone at his club and complains of sexual frustration. It is only in 1925 when he mentions J. R. Ackerley's play, *Prisoners of War*, that the underlying cause of his malaise becomes clear. Its subject-matter is homosexuality, and Sassoon comments: "I so seldom read anything even remotely connected

with the subject nearest my peculiar emotional distress". He has been brought back to the "Elysium" of his own life by the frustration of his desires.

Towards the end of 1923 the young Hyam Shaw, an actor and a younger man than himself, enters the scene. His relationship with Sassoon is a complex one, becoming a lasting one in which Sassoon, that he is being compensated for his miseries of the past. He even gives up his diary which he has used as an expression of loneliness and a device to combat it. This would be a deservingly happy ending.

Although Sassoon is not above usual literary jealousies and, to a extent, the bickering, it is clear he is made miserable by his hunting (which he has had to temporarily because of injury). Much is said of his hunting, but much is also said of his hunting for a woman, and he is always ready to betray, and he is always ready to be betrayed. He is always ready to be betrayed, and he is always ready to be betrayed. He is always ready to be betrayed, and he is always ready to be betrayed.

Sheila MacLeod

After the party

Stuart Maclure on an educational tour d'horizon

The World Crisis in Education - The View From the Eighties. By Philip H. Coombs. Oxford University Press £8.95, 0 19 503513 8.

Back in 1968, Philip Coombs was director of Unesco's International Institute for Educational Planning in Paris. In that year he published a book under the title *The World Educational Crisis: A Systems Analysis*, in which he matched the educational commitments of the developing countries (in particular against their overstretched resources) and showed that they were heading for some bitter disappointments. He also noted that the projected growth of education in the developed countries was inconsistent with all that was known of their economic prospects, too.

His book was well timed. The party was already coming to an end. I remember this well because in 1968 I wrote a pamphlet called *Learning Beyond our Means?* which proved conclusively that the world would come to an end early in the 1970s (or at any rate that the shine was going off education) because the level of funding enjoyed in the 1960s could not be expected to last much longer.

Now, some 17 years later, Mr Coombs has produced what amounts to an up-to-date. He examines the various elements in the "crisis" as they have unfolded since 1968. Now, as then, his emphasis is on the developing world and his data is drawn in large measure from Unesco, so there is an air of

unreality to most of the global figures. But no mistaking the message: potential school populations continue to explode; so does the demand for knowledge. The literacy rate may be marginally improving (in percentage terms) if the figures do not lie, but the number of illiterates continues to grow even faster, and there is no way struggling education systems can keep up.

Some of the interest has now shifted towards non-formal forms of education, linked more closely to community development, but the reader is left with the uncomfortable feeling that right or wrong, this is the only possible response to the overwhelming problems of formal education in countries without the teachers or the physical resources to cope with the Sisyphean tasks presented by the formal schools and colleges.

One of the phenomena which Mr Coombs draws attention to everywhere is the steady rise in costs. He quotes examples from various western countries. Cost per student in Swedish comprehensive schools rose by about 50 per cent (in constant prices) between 1963 and 1975. A similar index for Canada shows a rise from 100 to 165. Total current expenditures per pupil in the US (in 1979 dollars) rose from 991 in 1960 to 2,275 in 1980.

In part, no doubt, this is our old friend the relative price effect at work, forcing up the relative cost of labour-intensive services like education, because over time wages and salaries rise faster than prices. But Mr Coombs also notes the resolute resistance of education systems, everywhere, to the tech-

nological change (by which his earlier book had set great store). He argued then for team teaching, which promotes a change in the division of educational labour and therefore of salary structure. He is still enough a man of the Sixties to air the idea again.

This book will be invaluable for students of educational planning, especially those destined to work in the third world. But though it is aware of the weakness of the technocratic approach to these matters, it remains essentially technocratic in orientation, with some of the *disgrace* arrogance this implies. In fact what it plots is the failure (or at best the limited success) of the technocratic approach. A revealing section deals with the failure of the Experimental World Literacy Programme in the 1960s, quoting with approval from the Unesco evaluation:

It is a mistake to design overwhelming technical solutions to literacy problems that are only partly technical.

A broad, multidimensional approach to both development and literacy is required. Indeed, it would seem that literacy programmes can only be fully functional — and development contexts can only be fully conducive to literacy — if they accord importance to social, cultural and political change as well as economic growth.

I for one would have traded some of the reference material and dubious statistics for more critical analysis of the accepted wisdom. What is now needed is a bit more scepticism about current shibboleths.

Among this week's contributors

P. J. Baron is Principal Lecturer in Biology at the Polytechnic of the South Bank. Edward Blisen's latest autobiographical volume, *Second Skin*, is published

by Hamish Hamilton. Sheila MacLeod's new book, *Men, Women and Marriage in the Fiction of D. H. Lawrence* will be published in July by Heinemann.

Lynne Marjoram is head of chemistry at Kidbrooke School, South London. E. C. Wragg is Director of the School of Education at Exeter, and Chairman of the Schools Broadcasting Council.

VE Day happiness: one of the illustrations to Robert Kee's 1945: *The World We Fought For* (Hamish Hamilton £12.95, 0 241 11531 0).

Ways of dying

Elegies. By Douglas Dunn. Faber £4.00, 0 571 13443 2. C. By Peter Reading. Secker and Warburg £5.95.

In its very honesty, its resistance to disguise feeling in the manner of much embarrassed modern verse, *Elegies* must be regarded as an extraordinarily brave book. That is not to dispute the fact that these are cleverly worked poems; on the contrary, technically they are faultless. But how refreshingly, for once, not to have to battle through the brambles of "cleverness" to unearth the feeling.

Written after his wife's death in 1981, the power of this collection is the sense that behind each song of mourning lies the stronger power of love, which not even the final act of death can obliterate; love which, though lost, is committed to memory, and thereby continues:

Through all our years, my love, and I love you still.
(Re-reading Katherine Mansfield's *Bliss* and *Other Stories*)

Loss of the loved one's physical presence forces the bereaved's love into suffering isolation. Entering the room where she died, the poet is suddenly stripped of his resources:

Grief wrongs us so, I stand, and wait, and cry, and know why.
(*The Kaleidoscope*)

Dunn's greatest strength is his ability to cry; to allow both himself and his verse to grieve without shame:

She drew up lists, Requests, gave things away. I tore my heart out.
(*Thirteen Steps and the Thirteenth*)

The deliberate recalling of memories causes both regret and joy. Most painful is the unavoidable retracing of his wife's steps; the sudden coming upon her by accident, and yet as soon followed by the reminder that she is no longer there. Here, it is the smallness of death, the specifics that set this one apart from every other —

... until it feels in me —
Familiar with each kitchen-spot,
Each stain, each note in her neat hand, a sight to spin me

As if I have become a woman hidden in me —
Familiar with each kitchen-spot,
Each stain, each note in her neat hand, a sight to spin me

Into this grief, 'this kitchen pilgrimage'.

(Dining)
But the pain is in the fact that such specifics are inevitably lost in the routines, the commonness of it all; the "bureaucracy" of death. A clerk requires "morbid particulars":

"Was she good?" Everyone receives this Certificate.

You do not need even to deserve it.

(Arrangements)
The strength of personal, individualized love, creates an oasis of peace in the midst of suffering. Peter Reading's *C* differs in that it is a much more "noisy" book. Dying is a busy activity:

Daily the meat-waggons swing through the gates braying, pulsing blue light, their burdens already history scraped off the Tarmac.

The whole bureaucracy surrounding death, and, in particular, death through terminal illness, is more apparent. Some pieces read like D.H.S.S. claim forms, others like government nuclear survival brochures; the tone of clinical detachment making the horror more keenly felt:

All our patients die eventually. They should do six things for their 'Death Work':

They go through six emotional states (outlined by Kubler-Ross): (1) Denial, (2) Isolation, (3) Anger, (4) Bargaining, (5) Depression, (6) Acceptance. All, eventually. All.

C is a collection of prose pieces and poems which, in its various forms — conversations, reports, personal cries — travels through these states, albeit arbitrarily. It is the concept of death made a physical reality, the word made flesh. Dying is an undignified business and the pain is in the dying person's inability to alter that process:

The list goes on and on and interminably.

Rectal bleeding. Chemotherapy. Anger is what I feel at dying, anger. Why can't the dropouts and the drunks get this?

The structure of *C* — "100 (100-word units)", planned "incongruously", as Reading says — is, indeed, very "clever", but often (and inevitably) works artificially, particularly in the prose pieces. Real feeling there is, but, in hiding behind the disguise of the artifice, it lacks both the conviction and strength of *Elegies*.

Jack Stephen

Poets of yesterday

Poetry Today. By Anthony Thwaite. Longman £3.50, 0 582 49419 2.

Although his *Poems 1953-1983* appeared last year, Anthony Thwaite is coyly reticent about his own talent in *Poetry Today*. This is unfortunate for it is only when one appreciates that he is, in Edward Lucie-Smith's words, "almost the typecast of a poet who has been greatly influenced by the Movement without belonging to it" that the structure of his book becomes clear.

It is not the enthusiastic and committed manifesto the title suggests. It is rather more what it would have been had Thwaite added a final exclamation mark: *Poetry today!* I wouldn't give you licence for it. Now when I was a lad.

Literally as well as metaphorically it is centred on the Movement. No matter with that group, which included Philip Larkin, John Wain and Thom Gunn, came to fame with the publication of the *New Lines* anthology in 1955 and Thwaite's own subtle epiphany "A Critical Guide to British Poetry 1960-1984", his longest chapter is

devoted to them and a couple of others to a poetic rubbishing of the opposition. Thus he gives us four pages (and a photograph) on Larkin, praising his "refined unobtrusiveness but technically formidable skill" but offering no new insights, and a few gently critical paragraphs on the rest of the class of '55 before turning his attention to the Johnny-come-latelys. Literary historians will not be surprised to find him generally unimpressed by George Macbeth, Alan Brownjohn, I. D. Morgan and the other members of "The Group" ("a caravan which has passed on") and cool on the *Review* ("Hamiltonian minimalism").

This over-concern with the gang-warfare of the late 1950s and early 1960s is the fundamental weakness of the book. Thwaite is more confident smiling over his shoulder at what one might generously call the poetry of yesterday than he is when confronting the present, or come to that the last 15 years.

He is frankly inadequate on the move away from slim-volume, high-art stuff which has been pre-occupying many British poets through most of the

period of which he writes. I myself now taking an historical view that phenomenon of the 1960s and early 1970s, "pop" poetry, he sets before writing off Adrian Mitchell, Christopher Logue and all four of Liverpool poets in a little under 10 pages. More seriously, he has nothing to say about the young generation of contemporary poets who might reasonably expect to have found at the centre of any study of the poetry of today. Craig R. James, James Lenton, Andrew Motion and a handful of others are all depicted as a skippy five-page chapter and all affect to deal with New Poets 1970-1980 — a 15-year span which comprises more than half Thwaite's class period. Hardly the volume in 15 suggests then, but still a useful book. Anthony Thwaite writes well and at times very persuasively. In his own field there are few touch him: for the non-specialist reader still puzzling over the new he is the most comprehensive of guides.

Hugh Davidson

Forty years on ...

The Education System Since 1944. By Peter Gosden. Martin Robertson £22.50, 0 85520 280 7.

The Education System Since 1944 gives the story of a continual expansion of education provision, without a reliable sense of direction. Except for the 1944 Act itself, nothing ever arrived on time, anywhere, where anyone thought education ought to be during these 40-odd years. Indeed, they are a rather odd 40 years.

After the determined, purposeful surge of political will which produced a 1944 Act and found money and means to build schools and set the nation on a primary/secondary school pattern, energy seems to have been dissipated in endless wrangling about what it was all for. The book's last paragraph gives a political explanation: "The increased influence of the Department of the Environment centrally, and the Association of Metropolitan Authorities and the Association of County Councils locally, are both products of the greater emphasis on urban planning

considerations in recent years."

Gosden shows that while that party political influence was increasing (and interestingly cites Edward Short and Margaret Thatcher as two Secretaries of State particularly responsible) other controversies took their toll. As early as 1940 and 1941, the Permanent Secretary, Maurice Holmes, was refereeing a controversy between the Head of Elementary Branch, William Cleary, and the Head of Secondary Branch, G. G. Williams, about "comprehensive schools" or what came to be the tripartite system. We know the result, with Tomlinson as Minister abetting the decision, and it turned out to be an own goal. Conversely, all the Drive, Eccles, during two spells as Secretary of State, to inject some urgency into the development of technical and technological education ran into similar problems.

The account offered in this book makes the role of the Manpower Services Commission and the reasons for it all too self-evident. Apart from the strange omission of any reference to

the Newson Report, a somewhat perfunctory mention of the Assessment and Performance Unit, and a sufficient notice (why does this persist?) of the curriculum dimension of the Robbins Report, it is all too clear outline of the chapter headings indicate. Pupils and schools, curriculum and examinations, supply and training of teachers, school welfare, programmes, universities, further education, the government and industry, the education system.

This is a measured, almost entirely detached account. Rarely does an opinion enter, and hardly ever a judgement. It exposes the frustration experienced by Central Government, Local Government, teachers, unions and professional associations. As Gosden puts it: "But one principle in the government of education is the need to carry the support of the various education interests involved if a policy is to be successfully applied." It is the familiar canard problem: a donkey designed by a committee.

Norman Evans



VE Day happiness: one of the illustrations to Robert Kee's 1945: *The World We Fought For* (Hamish Hamilton £12.95, 0 241 11531 0).

R&D

Edited by Jessie Reid and Margaret Donaldson

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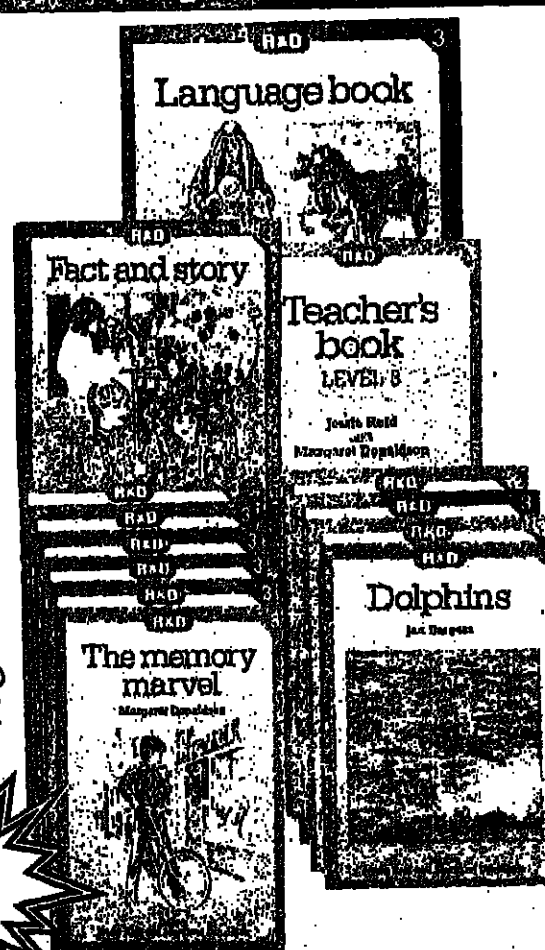
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The laws of thermodynamics

Clark and Pat Mason

ARTS

Portraits

Robin Buss reports
mid-term on a
biographical series

A Full Life
ITV (TVS), Sundays 2.00pm.

The credits for this series of interviews seem to imply that all the eminent personalities involved live at the end of the same shaded country lane; and when, after a pause to survey the back lawns of their respective homes, Jill Cochrane sits down with them in the drawing room, the interiors they inhabit look like variations of the same set. No doubt the bishop's library is different from that of the judge or the politician, and the composer's armchair is slightly less austere. But the surroundings suggest lives which have reached a plateau of achievement and the ritual preface, a reassuring pat on the back. The television crew, with its trailing wires and glaring lights, is nowhere to be seen.

In a recent BBC tribute to Tony Hancock, someone claimed that his outlook might have been altered significantly by an interview with John Freeman on *Face to Face*. This will not happen to the subjects of *A Full Life*. They are there to tell, not to be told. With minimal prompting and no really awkward questions, they give their own assessments of the paths that led them to these pleasant homes. The portraits they give, though different from those that might have been dragged out of them by John Freeman or on the analyst's couch, are no less true.

Not surprisingly, they find that the turning-points happened a long time ago. For Denis Healey (May 12), immediately after Oxford, with the experience of war; for Bishop Montagu (April 28), his adolescent conversion to Christianity and the pain of announcing it to his Jewish parents; for Michael Tippett (May 5), the separation from his family on being sent away to a particularly obnoxious public school; "I never forgave my parents..." The structure of the programmes and the choice of representative figures, invites us to see these as carefully composed, exemplary portraits.

After Healey there will be Kitty Muggeridge, Sir Nicholas Henderson, Charlton Heston, Lord Hunt and Lord Delfont. They will reminisce about themselves and the people they have known. If they appear, in the main, articulate and charming, it is because they are communicators and it is precisely these qualities that have brought them success. Denis Healey, though denying the charge of "intellectual tuggery", also reveals his pleasure at the end-thrust of political debate and the stamina needed for survival. And, among other things, John Miller's low-key series shows how much you find out by just allowing people to talk.

Next week

Fay Weldon proposes the total abolition of exams in literature. Reference books.

At a time when the written word is allegedly losing the young to the alternative attractions of television, video games and popular music, it may be reasonable to assume, given the latter interest, that the music press is one print medium which retains its readership. The increase in rock programming on television in recent times is mirrored in a growing range of publications, which now cater to a diverse market, with an increased demand for "specialist" publications, and offshoots into the general teenage press and the new style magazines (see *The TES* February 11).

The principal division in the field, however, is "between" the chart-oriented publications, all issued in magazine format, and the (in music press terms) newspaper "heavies". Short articles, song lyrics, glossy colour pictures, giveaway posters, and a simple prose style are the common characteristics of magazines like *No. 1* (weekly 40p), *Smash Hits* (fortnightly 40p), and *Chartbeat* (monthly 65p). These are essentially andyone publications, smartly produced for a young teen market, a print equivalent of Radio 1 and *Top of the Pops*, largely dedicated to the once again fashionable concept of the pop star as pin-up.

The image of the rock performer tends to polarize around two central models: the dangerous rebel, embodied in the early Presley or the outrageous Little Richard, and the boy (or girl) next door turned fantasy figure, crystallized in the early Beatles. The basic types still exist, however much the specific images may merge and change; it is difficult to name a credible rebel figure today, examples of the second category abound, with Culture Club's Boy George, Wham!, and Duran Duran leading the list. This situation may account for the recent growth of this section of the music press, together with a host of one-off specials; there is even a magazine devoted solely to *Spandau Ballet* (bi-monthly 75p).

These magazines concentrate their coverage on performers who fall into the latter category, and deal with the former only by diffusing any perceived "menace" thus contributing to the continual absorption of the music's wilder elements into an acceptable homogeneity: Presley's classic journey from teen rebel to cabaret act. Bracketed with this group is *Record Mirror* (weekly 45p), which carries the official BBC chart; a converted newspaper edged out by the pressure of competition, it remains uncomfortably located somewhere between the two groups in terms of content and visual presentation.

It is difficult to draw distinctions; they look very similar, cover much the same ground, and share a style and marketing strategy, drawing as much on the old teen magazines as on the established music press. At their most naive, the ethos they project for the actually rather tawdry and nasty rock scene is not so much trivial as essentially innocent (*No. 1*'s "Person 2 Person" feature recently had a reader asking Holly Johnson of Frankie Goes to Hollywood if he had a girlfriend; there can have been few more well publicized facts last year than his avowed homosexuality - here, though, John-



NME'S

Kenny Mathieson investigates rock magazines, and suggests that the music is getting the press it deserves

son plays the game, and simply fields the question with a neutral answer. If a more serious, or sordid, or simply different aspect of the music and its personalities is recognized, it is likely to be in *Smash Hits*, the pick of this group, or *Record Mirror*, comparatively more mature in their approach.

That these publications fulfil a persistent demand cannot be denied. Their numbers have swelled in recent years, and if they are shallow and ephemeral, they simply reflect much of the music they feature: they are well written and professionally produced within their self-imposed limitations. It may even be that they are the section of the music press which most accurately reflects the interests of their readers. Equally, it is likely that a portion of that readership, through changing taste or simply growing older, will move on to one or other of the more serious, or sordid, or simply different aspects of the music and its personalities.

NME set the pattern for the current music press in the late 1970s: their implicit model, though they would squirm to confess it, was the American *Rolling Stone* (fortnightly £1.50). It was *Rolling Stone*'s mix of music and current affairs, and its reliance on the techniques of the then emergent New Journalism, that set the standard for the *NME*'s renaissance. Developing from a San Francisco underground into a national institution, it attracted writers of the calibre of Hunter Thompson and Tom Wolfe (his early Seventies series "Post-Orbital Remorse" later became *The Right Stuff*), conducted in-depth investigations into controversial affairs like the Silkwood case, ran an ongoing series of celebrated interviews with musicians, writers, and other cultural figures, and consistently featured the most interesting and challenging music writing. By the late Seventies, the now New York based magazine had grown rather ponderous and predictable, while its music coverage became increasingly limited and reactionary, leading even-

tually to the publication of a music-only offshoot, the estimable *Record* (monthly 90p).

It was *NME*, which successfully translated this mix of music, culture (with particular emphasis on film and television) and politics into a UK context, and at a specific moment, undergoing a remarkable transformation in style and content during the initial punk explosion around 1976-7. It adopted a brash, exciting, often infuriating style, encouraging young writers, many recruited directly from the readership; the new stance was exemplified in Julie Burchill and Tony Parsons' diatribe on the rise and fall of punk, *The Boy Looked at Johnny* (1978), a wild, partial, impassioned, and conveniently selective re-writing of rock history. The page of *NME* have been liberally littered with suddenly fallen heroes ever since.

Established writers like Nick Kent and Charles Shaar Murray adapted gracefully to the new tack, often providing a counterbalance to the sometimes over-inflated contributions of their new colleagues. Ill-digested chunks of Nietzsche, Barthes and Brecht, to name only the most quoted, began to figure prominently, too often introducing only a hazy obfuscation, or a transparently irrelevant overkill. None the less, it was clearly the most exciting music paper around, as capable of reducing the reader to gasping as of winning their approval. Besides its committed writing and spectacular graphic style, the alternatives looked staid.

Melody Maker, now in its sixtieth volume, had always seemed a little dull, a "musician's" paper, more recently eclipsed in this area by specialized journals like *One Two Three* (monthly £1.20). *Sounds* was the relative newcomer, born in the era of progressive rock and associated with that style long after it had ceased to seem innovative. Both have taken their cue from *NME* since its late Seventies heyday, although *Sounds* made one early attempt to challenge *NME*'s success in identifying with a

particular new development: the championing of the short-lived & crazy, a combination of banal music and National Front politics, was a disaster. The writer involved, Gae Bushell, is now a *Sun* journalist, but the fiasco is still occasionally resurrected as a taunt by the rival papers.

Subjectivity is the essential key to the impressionistic style of the music press, at either end of the spectrum. The interview format remains the norm, with its concomitant temptation to concentrate on personality rather than music. There is little sense of dealing with an established canon, the worth of which is taken for granted, as in a magazine like *Gramophone*. Technical criticism and serious analysis of the music itself is rare; the attitudes, opinions, and tastes of the performers are foregrounded; positions are taken and vociferously defended in a manner more adversarial than evaluative. However much such an approach may be scorned by serious music critics, it produces a healthy diversity of opinion in a field which would probably not bear too much formal analysis.

In recent years, *Melody Maker* and *Sounds* have adopted a visual style as a repertorial manner corresponding to *NME*'s. I suspect it would no longer be easy for a casual reader to detect any major differences between them, although *NME* has a more transparent political leaning and overt current affairs content, and is generally a better written of the three, although always liable to slide into the self-regarding excess. It is still interesting of the weeklies, though a gap has narrowed more through the decline in *NME*'s pre-eminence than through any great strides taken by the others; their response to its challenge has been largely imitative (*Melody Maker* in particular seem to have something of an *NME* complex, to judge by the frequency of slighting remarks per issue).

The market for popular music is a continually shifting one, a diversity reflected in the increasing range of what might be considered specialist magazines within the field. Publications like *Echelon* (weekly 45p) and *Black Heat International* (monthly 75p) survey the range of black music styles; *Kerrang!* (fortnightly 80p) concentrates on heavy metal, while *The Face* (monthly 45p) and *Deluxe* (monthly £1.40) mix music and style. *Beathox* (monthly 40p) specializes in pop video. This before mentioning the many locally produced fanzines, another seemingly endless field. Occasionally, one of these, like *ZigZag* (monthly 85p) or the excellent *Jamming* (monthly 70p), emerges as a national magazine.

If the list is a lengthening one, however, the current quality of the rock press is less impressive. It may be that the music finds the press it deserves; in a dull, predictable, and unadventurous period, it may be unreasonable to expect the kind of excitement and vitality which characterised the late Sixties *Rolling Stone* or the *NME* of a decade later, when a tiresome and largely redundant rock mainstream had given way to the brash new wave of punk. Castigating the rock press in 1985 may simply be tantamount to shooting the messenger who brings the bad news.

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In a small radio studio in Liverpool, Howard Collins conducts a well-paced, lively interview. With a professionalism apparently born of long experience he ends it neatly on time. But Howard is still in his teens, unemployed and (owing to a motorbike accident) left school without his hoped-for qualifications. His broadcasting skill comes courtesy of the Ariel Trust.

A unique venture, the Trust began its work in 1982. Two major reports had concluded (to nobody's real surprise) that, although young people spend a lot of their time listening to radio, they know very little about how it operates. One of these studies concluded that Liverpool was an ideal place to set up a scheme that would develop broadcasting skills in young people.

The Gulbenkian Foundation put up the initial £10,000 necessary to launch the project and Philip Pinnington, formerly deputy news editor at BBC Radio Merseyside, was appointed director. Thanks to his energy and inspiration and to Merseyside County Council which has supported the project from the first, Ariel is now attaining impressive results, often with so-called "low achievers".

At any one time, it is running about sixteen courses, each for a group of six

Sound training

David Self visits a project which teaches young people to use radio

to eight people. Each course lasts for sixteen weeks and consists of weekly ninety minute or two hour sessions. For the first ten weeks, students learn the basic skills. These involve not only the mechanical ones of operating tape-recorders and mixing units but also the art of speaking and reading fluently in front of a microphone, writing cogent views and preparing and structuring news and sports bulletins. The second part of their course involves making a full-length programme.

Perhaps not surprisingly, there is no shortage of students. A feature about the work of the Trust shown in Granada Television's aptly-titled series for the unemployed, *Scramble*, resulted in a hundred applicants. While most students are in the 16-25 age range, courses are also arranged for younger age groups in conjunction with local schools. Other courses involve specific youth groups or are linked to MSC schemes. Admission to a course is by interview. This, according to Phil Pinnington, is not a selection process. Special skills and experience are not necessary. "But they must know what they're taking on. This is work."

Students echo this. Howard Collins recalls how he was "thrown straight into it... interviewing, presenting, acting, scripting..." Another student, Sarah Johnson who is a sixth former, is aware of how much she is getting out of it. She saw the Granada programme, applied successfully to the Trust and then got leave from school on Wednesday afternoons to attend so-called "low achievers".

At any one time, it is running about sixteen courses, each for a group of six

session learning to be interviewed for radio paid dividends at a university admission interview the following week.

Much of the venture's success is due to one person, as Howard has noticed. "It takes a teacher like Phil, and you don't get many teachers like Phil." In fact, Phil Pinnington is not a trained teacher. He worked first in stockbroking and then as local newspaper journalist in Chester. From there he moved to Radio Merseyside. "I interviewed a lot of top politicians in this country and it was that that made me come out and do this." This is not because he or the project has any political axe to grind ("I hope the Ariel Trust is virgin clean when it comes to that") but because he has something like a missionary's zeal in his desire to help young people to communicate. Ariel students are certainly learning this skill, and making an impressive range of programmes - including ones that get broadcast.

A feature about the Liverpool hitz went out on Radio 4, a half hour programme featuring the positive aspects of life in Tuxtech was heard on Radio 1, as was a feature about the Liverpool Garden Festival. Many programmes have been transmitted on Radio City (Liverpool's commercial radio station) and on BBC Radio Merseyside.

These have ranged from a thirty minute programme made and presented by primary school children to features on young alcoholics, heroin addiction and the local music scene. Radio Merseyside's programme organiser, Ian Judson, is objective about the output of the Trust. "There are

rough edges. Much has to be done in the area of presentation." Even so, he praises the thorough research, initiative and dedication of the young broadcasters.

This is not just polite encouragement. His station's music programme for black listeners, *Upfront*, is now presented by former students of Ariel Trust and he is contemplating a second series of a discussion programme, *Straight Talk*, also made by Trust students.

But Phil Pinnington is not just interested in notching up this kind of public success. "The by-products are just as important." By these he means the increase in confidence that can be detected in almost everyone who takes part in a course and by the young people's increased ability to express and project themselves. "They learn to start a conversation, to ask questions and not just say yes and no, looking at the floor all the time." Significantly, at least some of the intake from the unemployed on every course have gone on to get jobs.

More particularly, three young black people who were part of the very first course run by the Ariel Trust now have jobs with BBC Radio Merseyside. That said, the Trust obviously cannot promise its students jobs in broadcasting - although there is a view that if the new community radio stations proliferate as many people believe they will, broadcasting will no longer be the preserve of the broadcasters: access to the airwaves will be open to anyone who can make a programme.

However, the Ariel Trust is not just



about the training of potential broadcasters. Phil Pinnington's recent experience has led him to believe that the work of the Trust is fundamental to the education system. "If we could only get tape-recorders into every classroom, they should be used as much as chalk and blackboards from the age of four up till when the children leave school."

He appreciates the problems inherent in this aim, but also suggests that there are more tape-recorders lying around in schools than you might think and that teachers can learn the necessary skills.

Ironically, while it builds on experience and success, the future of the Ariel Trust is uncertain, tied up as it is with the future of local government in Liverpool. If it were prepared to change its philosophy, it could become a profit-making organisation. Instead, it is looking for new opportunities to work within further education and MSC programmes. Phil Pinnington is also eager to spread "the word" around the country. "Projects like this should be happening in every town and city." This is not just a desire to equip people to participate in the new community radio stations but for much more pragmatic reasons. "In an area like Merseyside in 1985, without the skills we're teaching, you're lost."

Memo matters

Jean Sergeant reviews two packs for aspiring young executives

Capital Cuts
Tutors Notes and Student Packs
The In-Tray Exercise
Teacher's Manual and Student Briefs
Both £16.50 each from Hobsons for CRAC.

CRAC Publications have recently launched two new role playing games for sixth formers and graduates. Both are a spin-off from CRAC's Insight Courses for Aspiring Young Executives and are marketed as a response to Sir Keith Joseph's clamor call for Entrepreneurship - but don't let that put you off!

The aim of *The In-Tray Exercise* is to introduce students to a range of personnel management decisions and is based on a dozen memos that arrive in the in-tray of the Personnel Manager of Plastic Products Limited. The background of the memos and the action required to deal with them illustrates various personnel functions including recruitment, industrial relations, training, career development, wages and salary administration, and manpower planning, together with narrowly defined personnel matters such as welfare and pensions. This mix offers plenty of scope for rich vignettes of industrial life: the Customer Liaison Rep. who has just been breathlessly "bullet proof". The realism is never in doubt.

Although the materials are designed for sixth formers and graduates, they might also be useful for fourth and fifth Form Career Groups or Liberal Studies classes in FE. Not only does the game effectively illustrate the work of a Personnel Manager, it also illustrates the border notion that in real life, decision making and taking, are rarely as simple as might at first glance appear.

Barnetshire, a Conservative controlled County Council, is setting out its budget for the coming year. Naturally, in this local Government exercise, as "life, the Officers for Education, Fire, Social Services, Waste Disposal and



on, have different and competing ideas about how the financial cake should be cut. A letter from Whitehall under the signature of I M Tight, Permanent Secretary, advises that "further adjustment" is necessary. Capital Expenditure must be reduced by £6,000,000 and revenue costs kept down by savviness on existing schemes. Hands up all those who think that sound familiar! Doubtless there are local Government aficionados who see public finance as matter meet for a relaxing bedtime read. Such potential players will need no convincing of *Capital Cuts*' value. For most of us, however, including many of the games' target audience, Local Government is, like measles, something that we have to go through. These players will - despite the difficulty of handling relatively complex briefs - find that the game succeeds in making the potentially unbearable, bearable. Perhaps even, when the game is in full swing and the players, briefs mastered, are fighting their departmental corner - arguing needs, agreeing compromises and making decisions - Local Government may turn out to be unexpectedly interesting and enjoyable. At the least, it will be far more understandable than

Teachers and other staff in schools and colleges often find themselves in the role of welfare or legal advisers to their students - and the rest of the family too. In the course of classroom lessons, or in casual conversation, students raise questions about employment, what will happen to them if their parents split up or - unfortunately, all too often - their immigration or nationality status. Their parents or relatives often have queries about entitlement to benefits or questions about health or housing matters, which are raised during interviews or meetings.

Basic Information Pack, produced by the National Association of Citizens' Advice Bureaux, will answer many questions raised by both adults and young people and has the great advantage of having its own updating service.

The pack comes in the form of two ring binders - the first covers immigration, education, employment and family queries; the second, benefits, health, housing, tax and consumer problems. It is aimed at "the inexperienced advice worker" who would be able to answer basic questions and refer on those more complex inquiries.

The section on education, which was written in conjunction with the Children's Legal Centre, will help answer most queries raised by students and their families - and probably those questions teachers themselves always wonder about. It not only covers the basic information parents and students need to know - such as types and choice of schools or education benefits, but also gives an outline of how to tackle problems at school - for example, bullying, difficulties with learning and the disciplinary system.

A particularly useful feature of the pack, which should guarantee its appeal to those working in schools and colleges, is that it includes a number of free information leaflets produced by Government departments and a helpful index of other free or inexpensive leaflets available to the public, and how to get them.

Isobel Reid

Isobel Reid works for the Children's Legal Centre.

notes

TOURISM

A new booklet to help young people understand the importance of the tourist industry to the economy has been published by the English Tourist Board.

The booklet is aimed primarily at 14-16 year olds in General Studies, economic and commerce course. It outlines the history of tourism and explains tourism's position in the British economy. The English Tourist Board, 24 Grosvenor Gardens, London SW1W 0ET.

STARTING TECHNOLOGY

The latest E J Arnold Education Supplies Catalogue contains 16 pages devoted to Craft, Design and Technology. Among new materials are the new Pressurefree Workbook, "Starting Technology" by Paul Shellcross which suggests ways of building machines and models illustrating scientific and technological principles. It is aimed at the 8-11 age range and can be used, say the company, by non-specialist teachers.

A series of workcards on the subject of "Harnessing Wind Power" is also available. They cover kites, parachutes, hot air balloons and sails and encourage children to design, build, test and redesign working models. E J Arnold and Son Ltd, Parkside Lane, Dewsbury Road, Leeds SL11 5TD.

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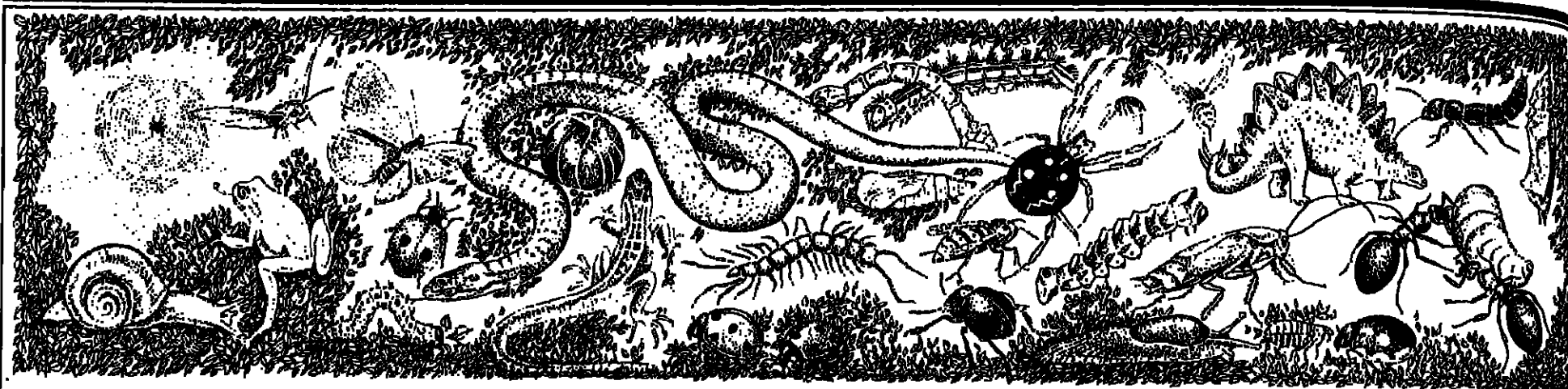
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RESOURCES



The great thing about animals is that children love them. And the smaller they are (both children and animals) the greater the attraction. Nice then to see three new publications designed to show animals as creatures with special needs, behaviour patterns, habitats, place in the food chain and response to the seasons. Encouraging too to see scientific method nurtured at every stage.

First Nature Watch
12 books plus teacher's notes
£7.20
Ginn

A collection of squire format, shiny paper back, full colour, picture story books is a delight. The editors have chosen a mixture of plant and animal subjects, large, small, exotic and familiar, and invited a clutch of artists to illustrate their passage through the year, mating, rearing their young and preparing for winter.

The series shows how birds propagate cherry trees, how the fruit helps fuel them for the long trip south, how ducks, snails and mice breed in the spring and migrate, hibernate or just keep their heads down through the winter, and the whole process starting again in the spring.

The illustrations, decorative, humorous or stylised, have tremendous child appeal and the teachers' notes should prompt discussion, language development and a proper spirit of enquiry. As a bonus, the fact that the series was first published in Zurich adds the odd, mind broadening continental touch - the squirrels are red, the country cottages log cabins and winter means skating and tobogganing.

Just one thought - how many teachers or parents - will feel up to explaining the hermaphrodite sex life of the snail, even with notes?

William Curtis Easy-to-Find Field Guides
£6.95 a set
Heinemann

Written by Pam Morris, primary education teacher at the William Curtis Ecology Park and Ann Pembury a junior teacher, these are intended for slightly older children but unlike most reference books, spurn the written word. This is how they work.

There are four books, *Habitat*, *Pond Animals*, *Land Animals* and *Birds*. First find your animal, maybe a caterpillar with hairy tufts. Locate it on the picture reference page. Only two possibilities really - one with, one without tufts. See page 46. It is a butterfly larva. Now use the pictorial life cycle. There the eggs, larvae, pupae and adult butterfly are shown in careful black and white detail, so is their place in the food chain (at every stage of development) and the appropriate *Habitat* - Waste Ground. Turn to the *Habitat* book for more details.

Gradually you get the picture. Not only is it easy to find your way round the guides, it is also easy to find the wildlife. Butterflies, snails, slugs, woodlice live on waste ground, ants, worms and centipedes on pavements and all manner of things in ponds.

Once they've got the hang of it, children enjoy the I-Spy, detective approach, shunting confidently between books to identify prey, predator or habitat and gaining research skills on the way.

The books show 67 common creatures and the plants which harbour or support them, all beautifully laid out and drawn by Nick John. My only criticism (as a confused birdwatcher) is that while the aphid is shown in all its glory every stage of its development, juvenile birds don't feature at all.

Nature watch

Susan Thomas and Francesca Greenoak on a selection of packs on animals and their habitats

Chick Keeping and Earthworm Study
£1 each
ILEA's Centre for Life Studies

Earthworm's delightfully tongue in cheek text deals with the anatomy, physiology, tastes and exotic practices of the worm. What could be exceedingly dull is actually riveting reading as it guides you through worm catching - with water, detergent, vibrations (alarm clocks or tap dancing) or, but only in desperation, potassium permanganate.

There are sections on identification, wormeries, outdoor and indoor activities and controlled environments to assess the creatures reaction to heat, light, moisture, taste and sound vibration. The illustrations are clear and entertaining, the advice informed and the reference section wide ranging.

Like *Earthworms*, *Incubating and Hatching Eggs* is meticulous in its concern for the well-being of the animal. Teachers are taken through the process of ordering, collecting and transporting (on their sides or broad end up) the fertile eggs, through incubating, first food and brooding, to the keeping, or disposing of the adult chickens to good homes booked well in advance.

I was particularly impressed by the section on scientific observation with its emphasis on humane alternative methods - tin can models to simulate heat loss in chicks - and its care for consultation with the pupils about the ethics of animal keeping.

The booklet includes an essential list of food and equipment suppliers, city farms, and resource material. With its support even rural townies should manage a small and successful hatching.

S T

Nature by Design: A Teachers' Guide to Practical Nature Conservation.
Published by The Urban Wildlife Group, 11 Albert Street, Birmingham B4 7UA.

The twelve pamphlets in this pack describe the background and practical realities of setting up an ecological field project in or near a school. Clear and down to earth, they are inspirational without raising unduly high expectations. Each scheme centres on an example of work actually carried out or in progress at one or more schools in the West Midlands, selected not simply on the basis of success but to show how some of the difficulties inherent in running a school project can be coped with. Suited to the project to the nature of the land is only the first stage - key teachers leave at unseasonable times, there is vandalism, theft, inadvertent damage, all these were experienced and taken in their stride by many of the schools described. All the extra funding and labour required by each scheme is listed, along with a list of books and other resources.

Projects were done by all kinds of school. A nursery and junior school combined to make a pleasant green quadrangle out of a dismal cypress, a tree nursery, now used by other local schools was set up in special school, and there are plans for a small urban farm. Several schools made ponds, encountering on the way unsuspected drainage pipes and in one case, the theft of two pond liners - this school is now experimenting with the complexities of making a (vandal proof?) concrete pond. Another primary school has contrived a butterfly and insect garden out of a corner of a concrete playground, and welcomes

nine species of butterfly and many other "mini-beasts". A well-organised 12 page appendix gives addresses, information about sources of funding and advice, a list of general books on conservation and another of suppliers. Altogether a sensible and useful compilation.

Cambridge Cut-outs.
By John Llewellyn Jones.
Pigeon, 0 521 26893 1.
Stickleback 0 521 26894 X, Lizard 0 521 26892 3; Human 0 521 26895 8; Frog 0 521 26891 5.
All priced £2.75.
Cambridge University Press. (Each pad: 40 A4 sheets).

Why do educational publishers still view photocopying machines with horror? Rather, they should be stimulated into producing wonderful books which by the nature of their content, design and production, function superbly and only as books - and would lose so much in the transfer to flat black and white copies that nobody would bother to do it. At the other end of the scale, there is the opportunity to bring out quality material of such efficiency and cheapness that copying becomes a slightly absurd.

This is the case with these five sets of Cambridge cut-out figures. They are simple, ingenious, effective and at £2.75 scarcely worth switching on the photocopier for. Though perhaps you should, for in addition to the 30 sheet pad of colour and cut-out figures, there are others which give background information, ideas for practical work, further suggestions for follow-up activities, and clear and concise instructions for colouring and assembling the cut-outs, all of which invite the teacher

Life on the Skin. Spiders, Snails and Woodlice. Mapping the Weather. All published by Pictorial Charts Educational Trust, 27 Kirchen Road, West Ealing, London W3 0UD. Price £4.94 post free.

The only time a common blue butterfly came into our garden, it fluttered into a spider's web. Before I even had time to drop my bags and go to the rescue, the occupant, the garden spider (*Aranea diademata*) darted out and administered the fatal bite, and we complemented wrapping it in silk. As E. B. White's famous pig might have said, "Some spider!" There is a series of colourful and interesting pictures of *Aranea* in the *Spiders, Snails and Woodlice* chart, on which wolf spider, garden snail and two species of woodlice, also feature, making an attractive and informative chart, on a subject usually avoided.

Even more shunned, are the numerous denizens of our own skin surfaces, which make the subject of another chart. Studying this selection of bacteria, viruses, fungi and assorted mites, I wondered whether our hostility towards them is entirely justified. After all, many of our internal bacteria perform vital services for us. It was gratifying to find that the accompanying leaflet, written by an enthusiastic BBC Radio News person Laurie Macmillan, gently steers two reasonably articulate experts, writer Brian Coe and Kodak education officer Geoffrey Bawcutt, through a list of topics, so expertly that it almost seems like an informal chat, and not the tightly scripted exercise it was.

Nobody who has heard Alec McCowan's dramatic rendition of the Beaufort scale, can feel the same about it again, but even the summary, reprinted in the weather mapping leaflet is potent stuff. The chart is mainly concerned with interpreting the weather map symbols, and illustrates one of the days the weathermen got it right. Though quite serviceable, the visual content and design is less interesting than that of the other charts. Nor do I regret does it tell us about North Uist, which arrived as mysteriously as Atlantis, vanished.

to photocopy as many more as are necessary.

While looking at the Cambridge mammal pad, I realised why I had found Jonathan Miller's body posture unsatisfactory. It was not simply that the body in question was nobody in particular, genderless, a collection of organs in search of character, but that it was tremendously over-produced for the amount of information it conveyed. By contrast, the body and organs used to illustrate the mammal cut-out, belong to an attractive but not over-glamorised young woman with public hair and credible looking breasts - a refreshing change from most biology and sex-education pictures.

As with all these designs, the colouring and cutting is kept to an undignified minimum. First the external shape is coloured "pink or brown" (nice to find she is not automatically white or Caucasian), then eight internal organs or groups of organs. Every step of the process is clear and cleverly conceived and contains a learning point. Instructed to colour the various parts of the digestive system green, you have to find and identify them (the breathing system is orange, and so on) then, as you complete the sticking you learn exactly where everything fits. Here is realistic teaching series which can be used with a wide age-range. I'm sure that not so common, common fog would agree that it presents a most acceptable alternative to dissection.

CONTINUING EDUCATION
The Learning Machine
BBC1
Thursdays, 11.15pm

It was about time someone provided an antidote to a succession of laudatory series about the micro in education. Whether *The Learning Machine* is the best way to do it I have no doubts, but it's a good attempt. One weakness is that Tim O'Shea, the first presenter, seems determined to simplify a fairly complex area. He is certain that the introduction of micros in schools has been badly managed, but we, the audience, are probably never entirely convinced.

However, he made some good points. The micro revolution in schools, he said, was founded on a promise, a boast and a threat for Kenneth Baker, then Minister for Information Technology, who wanted to ensure that "the kids of today are trained for the skills of tomorrow": who saw us as a nation leading the way with computers in education, and who foresaw national decline if we didn't impart computer skills to the coming generation.

None of these statements was true, argued Mr Shea, who finds the introduction of computers into schools an ill-considered project. (He had wanted to call the programme "Making the Least of the Micro".)

The first programme was especially good on in-service and initial training in using computers: it is weak and too much is being expected of teachers in schools.

But overall this programme and the next didn't hit home: maybe because Mr Shea was aiming for a knock out in the first half hour rather than a result on points after a fair number of

SCHOOLS RADIO

Photography
Six 20-minute programmes + three 35mm filmstrips.
Transmission: Radio 4 VHF/fm night-time broadcast; Monday 13 May to Wednesday 15 May 00.30-01.10 (two programmes per transmission).
Filmstrips available from Longman Group Ltd, price £6.95 each (excl VAT).

"Photography is a glamour profession, but the bottom end of it is not glamorous in any way," says veteran photographer Ivor Field towards the end of this six-part BBC Radiovision series. Mr Field hopes he is not being too depressing, but there is a sense in which this enterprise, aimed at the upper secondary students wondering where to go next, is all about removing illusions and substituting hard fact for fantasy.

The series divides sharply into two parts. The first three radio programmes, and the first two Radiovision filmstrips, are devoted to a general introduction to the principles of photography. Called, respectively, *The Science of the Lens*, *The Chemistry of the Film*, and *Developing and Printing*, they attempt to cover the theory and practice of photography, within the context of the most popular, 35mm or smaller formats, and holiday snapshots.

The same ground has been fairly well covered by television series for the general public over the past few years, and I wondered at first just how valuable yet another, inevitably superficial, foray into the meaning of f-stops and focal lengths and film speeds would be in a schools context. The first two programmes sound, for all the world, like *Tuesday Call* having a go at photography without the professional questions. The unfailingly enthusiastic BBC Radio News person Laurie Macmillan gently steers two reasonably articulate experts, writer Brian Coe and Kodak education officer Geoffrey Bawcutt, through a list of topics, so expertly that it almost seems like an informal chat, and not the tightly scripted exercise it was.

The major points of discussion are illustrated in the accompanying filmstrips. These only really come into their own when the most difficult concepts, like the relationship of lens aperture to depth of focus, are under consideration.

Generally, the explicitly information-giving pictures are better than the rather uninspiring set of holiday snaps used to illustrate certain effects: indeed, some of them are deliberately badly composed, giving the pundits an opportunity to leaven their theoretical



Learning what?

Carolyn O'Grady on a series which attacks the basis of the micro revolution in schools

rounds.

In the second programme, "Why is educational software so lousy?", Mr Shea again seemed to be over-anxious to be seen to be taking a tough uncompromising stance which was not always backed up by those he interviewed. Bill Tagg, Head of Hertfordshire's Advisory Unit, took a far more moderate view of educational software than Shea with a result which was sometimes comic: Mr Shea was to be seen determinedly ignoring Mr Tagg's more tolerant comments in his effort to

persuade us that educational software is indeed lousy.

The second half of the programme was devoted mainly to a company called Island Logic of whom software Mr Shea approves. And they did indeed seem to be producing some very interesting stuff. What was lacking unfortunately was a clear explanation of why this software was educationally worthwhile while the rest was superficial. Such an explanation would have been a real contribution to educational computing.



Good shots

Bill Hicks reviews a series on photography

discussions with some opinionated advice on "what makes a good photograph". Few would disagree with their repeated assertion, that it is important to know what you want the picture to be like before you start shooting.

Programme three moves out of the studio as photographer David Bellan investigates the world of printing and processing firms. He meets a man from the Consumers' Association who carried out a survey of colour labs for *Which?*, and urges students to conduct their own local surveys to see which gives the best quality prints at the best price. The programme ends with some general advice on setting up a home darkroom for black-and-white printing.

The second part of the series is specifically career-oriented. Programmes four and five are case studies of, respectively, a commercial and industrial photographer, and a "High Street" photographer.

These are both excellent, vivid examples of radio documentary. The commercial photographer lets us into some of the secrets of his trade, and we learn of the problems of finding the perfect apple for an advertising shoot, or of the fact that "salads and people

go limp under lights". His enthusiasm for making even the dreariest of industrial objects into exciting and beautiful images is infectious.

The High Street, or, as he preferred to call himself, "social" photographer Bob Glover, argues that an understanding of human psychology is one of his chief assets. He expects his portrait subjects to give him at least an hour of their time, and always demands ten minutes alone with newly-married couples to get that very special wedding picture. Unlike many High Street practitioners, Mr Glover actually likes doing weddings.

In both cases, the importance of efficient management is emphasised. These men are running businesses, and have to cope with the usual businessmen's problems of taxes, rates, rents and wages.

In the final programme, *Setting up on your own*, we hear from young people who have at least made a start on a photographic career. An 18-year-old apprentice to a successful commercial photographer has no academic qualifications at all, and finds himself doing something different every day: work in the darkroom, setting up equipment, sweeping the floor: "It's brilliant," says he.

Michael Short, head of photography at Gloucester college of art and technology, describes the facilities offered to students following the now more conventional, HND or degree route into the profession.

Somehow, I feel that the many cautionary tales told by some of the old hands, especially in this last programme, about photography not being all pop stars and beaches in the Bahamas is unnecessary. Most young people, however talented, only too willingly tolerate boring tasks to begin with if there's any hope of an interesting life ahead.

The aspect of exploitation in the photographic industry is one of the many topics the series, despite the claim in the teachers' notes that it covers all aspects of photography, does not touch on. Of course it doesn't cover all vast areas, such as photojournalism, fine art photography, documentary photography, and the history of photography, are not mentioned, and I doubt if they could be covered in a series twice the length of this one.

As far as it goes, though, this is a welcome series, looking at photography through the harsh filter of the 1985 school-leavers' employment prospects. Both practical and career sessions are likely to raise many more classroom questions than a non-specialist teacher could answer, and re-cue to the strong "Useful Addresses" section of the teachers' notes is recommended.

Better argued was the third programme presented by Celia Hoyles, Professor of Mathematics at The Institute of Education in London. Called *The Gender Gap*, it asked why girls seemed so uninvolved with computers in schools and what could be done to get them more involved. "Computers will play a central role in our society," Miss Hoyles argued. Ignorance of computers would disqualify young people from positions of power, and on the present showing a high proportion of the disqualified were going to be girls.

She led us on a fascinating tour of attitudes in schools and authorities: the high point of which for me was a seminar in which teacher participants were given fake details of two children - Denise and Denis - to discuss their future. What they didn't know was that the details were exactly the same. What emerged in the discussion of Denise was a battle of the sexes, with the men arguing for hairdressing and nursing while the women wanted Denise to continue her education. They all agreed that Denise should stay on.

Miss Hoyles was also carefully critical of Croydon's policy towards girls - Croydon is one of the few authorities which has produced a syllabus and materials designed to encourage girls to take more of an interest in computers, but is wary of doing this, said Miss Hoyles, was to take the mathematical and scientific elements out of computers, when what was required, she said, was a new approach to mathematics. "In the right sort of learning environment and with the right sort of software" - and she favours Logo - "girls can and do enjoy and do very well in mathematics". Modestly she never pointed out that she herself was the best proof of this.

Circus drama

CHILDREN'S TELEVISION
Travellers by Night
ITV, Sundays 4.30pm.

Sunday teatime is traditionally the BBC's "family drama" slot, the home of its serial adaptations of *Moonfleet*, *Ben Hur*, *Wiltshire*, *Collins* and *Charles Dickens*. Now the ground has been borrowed by TVS and a new six-part dramatization of Vivien Alcock's novel *Travellers by Night*.

With a full-grown Indian elephant called Rani and a couple of teenagers as the stars, a circus background and a plot which involves midnight chases through the New Forest, the serial can hardly fail. It is not the hard-edged stuff of *Grange Hill* or even the average *Dramarama*; but it is probably right for Sunday afternoons.

Clearly it is all going to be good. Battling Ballerina stuff with a happy ending as the credits roll on episode six. There is even a sentimental subplot. Belle's face has been badly scarred in a high-wire accident, and when no one is looking she and Charlie are out busking on the roadside to raise money for the plastic surgery which will restore her looks.

Wisely, the TVS production consistently plays down the slush and concentrates on the action. There is always plenty going on, and it usually bears out the old adage about working with children and animals. Rani walks away with nearly every scene. Unusually, J. G. Devlin, the elderly elephant trainer, and Colin Jeavons (lead a good cast; but it must be said that Lisa Coleman and Jake Coppard as the teenagers make more convincing actors than they do circus performers).

Hugh David

briefings

radio & tv

For schools

NB **PHOTOGRAPHY**
(Monday - Friday, 00.30 VHF4)

A new series, three radiovision and three radio programmes, combining science with business studies. See review on this page.

INSIGHT
(Tuesday, 9.30, Friday 10.48 ITV)
"Magic Words" presents two poems to show hearing impaired children that poetry is accessible to them whether in words or signs. Victoria Wood as "Wordwitch" adds a little fun.

MINDSTRETCHERS PROBLEMS
(Tuesday, 12.02, Wednesday, 10.40)

SOLUTIONS
(Friday, 10.40 BBC2)
Does the annual report of the "Ticky Tacky Old Rolled Gold Chocolate Company" prove the company's success? Ten to twelve year olds seek the answer in "Lies and Statistics".

BRITISH AND SOCIAL HISTORY
(Tuesday, 14.15 BBC2)

An archive film history of the social impact of the motor car is introduced for 14 to 16 year olds by David Bellamy.

ADVANCED LEVEL STUDIES: STATISTICS
(Wednesday, 11.17 BBC2)

The queues of vehicles at the toll booths east of the Severn Bridge illustrate the procedures involved in "Simulation" from collecting the data to interpreting the computer print-out.

MIDDLE ENGLISH
(Thursday, 9.30, Friday, 11.22 ITV)

Reporter, John Ayers, examines the Sinclair C5. He looks into research, design and testing and asks "is it really a revolution in personal transport?" Ten to twelve year olds are encouraged to invent their own form of transport.

WAVELENGTH
(Thursday, 11.30 VHF4)

"Last Page First" reports on the fascination of the problem pages in girls' magazines.

NB **SECONDARY SCIENCE**
(Thursday, 00.30 VHF4)

Selected topics from CSE and O level syllabuses. "The mole concept" and "Uniformly accelerated motion" are supported by computer software. "Ions and ionisation" and "Lenses and optical instruments" are radiovision programmes.

Continuing education and general interest

PRINT-IT-YOURSELF
(Saturday, 13.30 C4)
Advice on how to do your own printing.

ABOUT TIME
(Wednesday, 21.00 C4)
This new series examines aspects and concepts of time through the ages.

4 LICENSED OFF-AIR RECORDING

Titles Available For Recording Sunday 12th May 1985

Approximate Transmission Times	Friday 17th May
Sunday 12th May	7.30pm Right To Reply For Code A
5.30pm The Business Programme For Code B	8.15pm A Week In Politics For Code B
10.30pm Who Can't Keep It The Best For Code B	8.45pm The Best Of The Best For Code B
4.00pm Curiosity Tales: Immigration For Code C	Saturday 18th May
5.30pm I Could Do That: Coping With Problems For Code C	1.00pm Chaps Comic Series II: Firework Night For Code B
Tuesday 14th May	1.30pm Price Is Yoursell: Set Salad For Code A
3.45pm Years Ahead Compendium For Code B	For More Information Contact:
Wednesday 15th May	GUILD LICENSING
6.00pm The Thought Of Sport: Canoeing For Code A	6 Pines Road, Peterborough PE1 5YB
8.30pm Diverse Reports For Code B	(0753) 215511
	10.30pm The Best Of The Best For Code B

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Other than by Subjects

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Other than by Subjects

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NURSERY TEACHERS

Scale 1
Required September 1985

A number of nursery vacancies are available for September 1985. These posts would be suitable for probationers.

Previous applicants are still being considered and need not re-apply.

London Allowance: £1038.

Applications forms (s.a.s. please) available from The Director of Education, to whom completed forms should be returned by 21st May 1985.

Education Offices, 379/383 High Street, Stratford, E15 4RD.

An Equal Opportunity Employer

(17641)



FRINGE AREA LONDON ALLOWANCE £284 P.A. THROUGHOUT THE COUNTY

Generous re-location expenses in approved cases. Assistance with temporary housing may be available.

HEADSHIPS

GREAT BOOKHAM COUNTY FIRST SCHOOL, Lower Road, Great Bookham.

HEADTEACHER required for the commencement of the Spring Term 1985 (or sooner if possible) for the Group 3 County First School for pupils aged 5-8 years.

N.O.R. - 142

Application form and further details from Area Education Officer, 14A/B North Street, Guildford, Surrey GU1 4AF.

Closing date 24 May 1985.

THE MEAD COUNTY FIRST SCHOOL, Newbury Gardens, Ewell, Surrey.

HEADTEACHER required for the commencement of the Autumn Term 1985 for this Group 5 County First School for pupils aged 5-8 years. Salary Scale £12,042 - £13,317 p.a.

Estimated N.O.R. (January 1986) - 239.

Nursery Unit with 20 placed plus P.H.U.

Application form and further details from North-East Surrey Education Officer, 7 Monument Hill, Weybridge, Surrey.

Closing date 24 May 1985.

(17672)

WALTHAM FOREST

AN EQUAL OPPORTUNITY EMPLOYER

Required for September, temporary Nursery Teacher, Scale 1, at Davies Infants' School, St. Michaels R.C. Junior & Infants School, Newport.

For further details see advertisement under 'Headships'.

Scale 1, (36353) 100026

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For further details see advertisement under 'Headships'.

Scale 1, (36353) 100026

NURSERY EDUCATION

continued

HERTFORDSHIRE

ST. HERNADETTE RC JM SCHOOL, Wellingham Way, Shenley Lane, London Colney, St Albans, Herts. AL1 1JL. Group 4. (From St Albans) Required for September 1985 an enthusiastic Nursery Teacher, Scale 1, for a 60 place 2 sessional purpose built nursery unit. The preferred candidate will be a practising teacher with a minimum of 3 years' experience in a nursery school. The successful candidate will be responsible for the nursery in the life of the school. Applications with names and addresses of 3 referees to Sister Josephine, the Headmistress of St. Hernadette RC JM School, 019777 100025

NEWHAM

LONDON BOROUGH OF NEWHAM CENTRAL PARK INFANT SCHOOL, Central Park Road, London E6 5JW. Head Teacher: Mrs C.L. Simpson. Number on roll: 202 plus 90 PT Nursery. NURSERY TEACHER TO COVER MATERNITY LEAVE. Scale 1. Required June 1985. The successful candidate will be a practising teacher with a minimum of 3 years' experience in a nursery school. The successful candidate will be responsible for the nursery in the life of the school. Applications with names and addresses of 3 referees to Sister Josephine, the Headmistress of St. Hernadette RC JM School, 019777 100025

BRADFORD

METROPOLITAN COUNCIL, BRADFORD METROPOLITAN COUNCIL, 100026. The Bank, 101, Bradford BD10 6QA. Applications are invited from suitably qualified and experienced teachers for the Headship of this urban, multi-ethnic school. Estimated roll 147 pupils aged 3-5. Application form and further details can be obtained from the Chief Education Officer, County Hall, Bradford, MK42 9AP on receipt of a stamped addressed envelope to whom completed applications should be returned by 25th May 1985. (36145) 110010

NORTH YORKSHIRE

COUNTY COUNCIL, WESTERLYN SCHOOL, HARROGATE. Primary School. Harrogate. Required to commence September 1985 a Teacher with Nursery Training to be responsible for the 20 place Nursery Unit. The successful candidate will be a practising teacher with a minimum of 3 years' experience in a nursery school. The successful candidate will be responsible for the nursery in the life of the school. Applications with names and addresses of 3 referees to Sister Josephine, the Headmistress of St. Hernadette RC JM School, 019777 100025

BUCKINGHAMSHIRE

FRINGE AREA LONDON ALLOWANCE £284 P.A. THROUGHOUT THE COUNTY. Generous re-location expenses in approved cases. Assistance with temporary housing may be available. HEADSHIPS. GREAT BOOKHAM COUNTY FIRST SCHOOL, Lower Road, Great Bookham. HEADTEACHER required for the commencement of the Spring Term 1985 (or sooner if possible) for the Group 3 County First School for pupils aged 5-8 years. N.O.R. - 142. Application form and further details from Area Education Officer, 14A/B North Street, Guildford, Surrey GU1 4AF. Closing date 24 May 1985.

SURREY

THE MEAD COUNTY FIRST SCHOOL, Newbury Gardens, Ewell, Surrey. HEADTEACHER required for the commencement of the Autumn Term 1985 for this Group 5 County First School for pupils aged 5-8 years. Salary Scale £12,042 - £13,317 p.a. Estimated N.O.R. (January 1986) - 239. Nursery Unit with 20 placed plus P.H.U. Application form and further details from North-East Surrey Education Officer, 7 Monument Hill, Weybridge, Surrey. Closing date 24 May 1985. (17672)

WALTHAM FOREST

AN EQUAL OPPORTUNITY EMPLOYER. Required for September, temporary Nursery Teacher, Scale 1, at Davies Infants' School, St. Michaels R.C. Junior & Infants School, Newport. For further details see advertisement under 'Headships'. Scale 1, (36353) 100026

WALTHAM FOREST

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County of Cleveland

An equal opportunities employer

CLOSING DATE: 24TH MAY, 1985

Application forms and further details for the headship and other posts obtainable from the County Education Officer, Education Office, Woodlands Road, Middlesbrough, Cleveland TS1 3BH. (Telephone Middlesbrough 24016 and 3017) unless otherwise stated. Financial assistance with household removal expenses may be available in approved cases.

PRIMARY SCHOOLS

WEST VIEW PRIMARY SCHOOL, Davison Drive, Hartlepool, Cleveland TS24 9BP.

PRIMARY EDUCATION

continued

KINGSTON
UPON THAMES
ROYAL BOROUGH OF
KINGSTON UPON THAMES
EDUCATION OFFICE
Orchard Road, Chessington,
Surrey KT1 9JH
Tel: 01-897 3553
Required for September
1985. An enthusiastic and
experienced teacher with
ability to teach the full infant
range. Please state other
interests and curriculum
strengths. Scale 1.
Plans send stamped address
envelope for application
form to the County Education
Office, County Hall, North-
ampton, N1 1AE, to whom
completed forms should be re-
turned by 24 May 1985.
(136314)

Application forms available
from Director of Education
and Recreation, Guildhall,
Kingston upon Thames, Sur-
rey KT1 1EU (see page 1), to
be returned to the Head-
master at the School by Monday,
12 May 1985. 110023

NORTH TYNESIDE
METROPOLITAN BOROUGH
OF NORTH TYNESIDE
1985 TEACHERS OF MUSIC
HOLY CROSS R.C.
Primary School
Carmichael Road, Wallsend
NE28 0EP
Required for 1st September
1985.
Nursery
Teacher for 40 F.T.E.
Unit. Enthusiastic, Roman
Catholic preferred.
Application forms are
available from the Rev. P.
McKie, Holy Cross R.C.
Primary School, Wallsend,
Tyne and Wear, NE28 0EP.
The successful applicant
will have flexibility and en-
thusiasm.
Form and details from Head-
master, s.a.e. (136314) 110023

NORTH YORKSHIRE
COUNTY COUNCIL
HARrogate AREA
WOODLANDS COUNTY
PRIMARY SCHOOL
Required for September
1985 for one year only a
teacher for Junior - Scale 1.
Application form (S.A.E.)
please send to the Director
of Education, 55 Grove
Road, Harrogate, YO1 1ER,
to whom applications should be
returned within 14 days of the
advertisement. 110022

NORTH YORKSHIRE
COUNTY COUNCIL
SCARBOROUGH AREA
NORTHSEA COUNTY
PRIMARY SCHOOL
Maple Drive, Scarborough
North Yorkshire YO11 1JH
Required for September 1985
an experienced teacher for
middle infant class - Scale 1.
GLADSTONE ROAD COUNTY
INFANT SCHOOL
Water Street, Scarborough
North Yorkshire YO14 7DD
Required for September 1985 a
versatile Infant Teacher. Abili-
ty to play piano/organ an
advantage.
Send stamped addressed en-
velope for application form to
the Area Education Officer,
Victoria Road, Scarborough
YO11 2EG.
Completed application
form should be returned to the
Headteacher at the school
for consideration. Please en-
close a recent photograph and
details of this advertisement.
(107563) 110022

NORTH YORKSHIRE
COUNTY COUNCIL
NORTHSEA AREA
HOSPITAL
Northampton
Primary School
For full details refer to Special
Education Section. 110022

NORTH YORKSHIRE
COUNTY COUNCIL
NORTHSEA AREA
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Northampton
Primary School
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NORTH YORKSHIRE
COUNTY COUNCIL
NORTHSEA AREA
HOSPITAL
Northampton
Primary School
For full details refer to Special
Education Section. 110022

OLDHAM
METROPOLITAN
BOROUGH
HOLY ROSARY R.C.
PRIMARY SCHOOL
Fitz Roy Avenue, Oldham
OL1 1JH
Required for September
1985. Teacher of Music in
advance of the school.
Scale 1.
Application forms (see)
returnable to the Rev. P.
McKie, Holy Cross R.C.
Primary School, Wallsend,
Tyne and Wear, NE28 0EP.
The successful applicant
will have flexibility and en-
thusiasm.
Form and details from Head-
master, s.a.e. (136314) 110023

SURREY
EDUCATION COMMITTEE
KINGSWOOD COUNTY FIRST
SCHOOL
Scale 1 Reception class teacher
required for September 1985.
Candidates should be able to
offer music. An interest in Art
and Craft also an advantage.
Application form and fur-
ther details available from the
Headmaster, Tel: 01-897 3553.
(136314) 110023

WALTHAM FOREST
AN EQUAL OPPORTUNITY
EMPLOYER
Required for September
1985.
DAVID INFANTS
Primary School
Davies Lane, London E11
5DR
Head: Mrs. D. Pacey

WALTHAM FOREST
AN EQUAL OPPORTUNITY
EMPLOYER
Required for September
1985.
DAVID INFANTS
Primary School
Davies Lane, London E11
5DR
Head: Mrs. D. Pacey

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EMPLOYER
Required for September
1985.
DAVID INFANTS
Primary School
Davies Lane, London E11
5DR
Head: Mrs. D. Pacey

WEST SUSSEX
ST. WILFRED'S R.C. SCHOOL
School Close, Queen Elizabeth
Avenue, Burgess Hill, West
Sussex BN27 3JH
Permanent Scale 1 Teacher re-
quired for September 1985 to
teach a class of 3rd and 4th year
Juniors. Practising Roman
Catholic preferred. A wide-
ness to be fully involved in the
life of the school and particu-
larly to recognise the links
between Parish, home and
school. Application forms and details
available from Headteacher,
Mr. D. Sullivan. To be returned
s.a.e. (13605) 110022

WEST SUSSEX
ST. JOHN'S R.C. SCHOOL
Blackbridge Lane, Horsham,
West Sussex RH12 1RR
Required September 1985 a
teacher with Infant and Junior
experience and the Catholic
Faith. The successful applicant
will have flexibility and en-
thusiasm.
Form and details from Head-
master, s.a.e. (136314) 110023

WEST SUSSEX
ST. WILFRED'S R.C. SCHOOL
School Close, Queen Elizabeth
Avenue, Burgess Hill, West
Sussex BN27 3JH
Permanent Scale 1 teacher re-
quired for September 1985 to
teach a class of 3rd and 4th year
Juniors. Practising Roman Catho-
lic preferred. A wide-ness to be
fully involved in the life of the
school and particularly to re-
cognise the links between Parish,
home and school. Application
forms and details available from
Headteacher, Mr. D. Sullivan. To
be returned s.a.e. (13605) 110022

WILTSHIRE
Please see display adver-
tisement on Page 38.
(100044) 110023

WIRRAL
METROPOLITAN
BOROUGH OF WIRRAL
WIRRAL EDUCATION
Required 1st September
1985.
A number of vacancies
exist within Primary
Schools at both Scale 1 and
Scale 2 levels. For Infant and
Junior teachers who can
offer MUSIC as a subject
strength. Applications are
invited from both pri-
vate and experienced
teachers who could develop
the teaching of Music
within the role of Music
Co-ordinator.
Application forms can be
obtained by telephone
(051-647 7000, Ext. 614).

WIRRAL
METROPOLITAN
BOROUGH OF WIRRAL
WIRRAL EDUCATION
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Co-ordinator.
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(051-647 7000, Ext. 614).

Remedial and Special
Needs Teaching Posts

Heads of Department

DOUGLAS
EDUCATION
ALTRINGHAM
HEAD OF TEACHING
SUPPORT SERVICE (SENIOR)
ALTRINGHAM
A vacancy exists for a Head of
the Teaching Support Service
which is well established and
consists of 52 teachers offering
support to pupils mainly in the
primary age range in main
stream schools who are ex-
periencing learning difficul-
ties.
Further details and applica-
tion forms are available from
the Director of Education,
Preston, Lancashire, PO1
1ES. Closing date 24th May
1985. (14370) 110118

Scale 2 Posts and above

BRISTOL
C.E. (AIDED)
INFANTS' SCHOOL
Bourne Street, Easton,
Bristol BS5 0BS
LANGUAGE DEVELOPMENT
UNIT
Required from September
1985. An experienced and en-
thusiastic teacher with special
skills and knowledge of lan-
guage development work with
young children who have lan-
guage difficulties or disorders.
Close approach to the
mainstream curriculum. This
role involves working with a
multi-disciplinary team, to keep
records and write reports for
parents and the school. The
successful applicant will be
involved in the life of the
school and particularly to re-
cognise the links between Parish,
home and school. Application
forms and details available from
Headteacher, Mr. D. Sullivan. To
be returned s.a.e. (13605) 110022

Scale 1 Posts

NORTH YORKSHIRE
COUNTY COUNCIL
CARR COUNTY INFANT
SCHOOL
For full details refer to Special
Education Section. 110022

Middle School
Education

Headships

BRADFORD
CITY OF BRADFORD
METROPOLITAN COUNCIL
MIDDLE SCHOOL
Required for September 1985,
a suitably qualified and experi-
enced teacher for the Headship
of a middle school. The suc-
cessful candidate will have
experience of working with
children who are in need of
special needs. Ability to
develop and implement a
curriculum for the school and
in sympathy with the ethos
of the school. (Scale 2).
Application forms and fur-
ther details from the
Headteacher, Tel: 01-274 5555.
(13605) 120012

BRADFORD
CITY OF BRADFORD
METROPOLITAN COUNCIL
MIDDLE SCHOOL
Required for September 1985,
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of the school. (Scale 2).
Application forms and fur-
ther details from the
Headteacher, Tel: 01-274 5555.
(13605) 120012

Deputy Headships
Second Masters/
Mistresses

By Subject Classification

Art and Design

BRADFORD
CITY OF BRADFORD
METROPOLITAN COUNCIL
MIDDLE SCHOOL
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Headteacher, Tel: 01-274 5555.
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METROPOLITAN COUNCIL
MIDDLE SCHOOL
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METROPOLITAN COUNCIL
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curriculum for the school and
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of the school. (Scale 2).
Application forms and fur-
ther details from the
Headteacher, Tel: 01-274 5555.
(13605) 120012

Remedial and Special
Needs Teaching Posts

Heads of Department

By Subject Classification

Art and Design

BRADFORD
CITY OF BRADFORD
METROPOLITAN COUNCIL
MIDDLE SCHOOL
Required for September 1985,
a suitably qualified and experi-
enced teacher for the Headship
of a middle school. The suc-
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experience of working with
children who are in need of
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MIDDLE SCHOOL
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of a middle school. The suc-
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children who are in need of
special needs. Ability to
develop and implement a
curriculum for the school and
in sympathy with the ethos
of the school. (Scale 2).
Application forms and fur-
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in economics, Child Care and Needlework, and
Art. Timetable adaptable to soil spots.

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(6 years)
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Teacher, teacher of Social Education/Life
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DL
-18 years)
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Boys' P.E. able to make contribution
Department.

114

EXTRA

Julie and her great discovery

continued

"Yes, Julie. But it won't go on giving the right answer."

"It does, sir. Press $\square$ again (the calculator had a constant facility). See - 1040."

My moment of triumph was about to come. Julie's theory is about to hit the dust.

"Yes Julie. But next time it goes wrong".

"No it doesn't, sir. You just keep pressing $\square$."

"Show me!"

And here it is. The moment when Julie joined the greats. Newton, Leibnitz, look to your laurels!

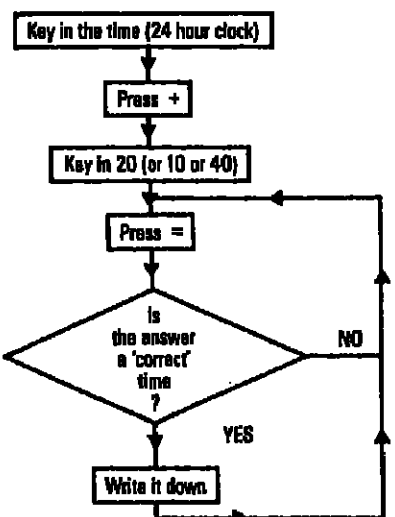
"Look $\square$ gives 1060, which isn't a right time, so press $\square$ again. 1080. That isn't right either, so press $\square$ again. 1100. That's right, isn't it?"

By Jupiter! The girl is right! I start pressing "equals" on my calculator, fascinated by the beautiful simplicity of it and desperately trying to understand it. I am sure the question "Why does it work?" is on her lips. I shall have to admit I am not quite sure!

The bell goes - frantic collection of calculators, rulers, books, pencils. Check all is there. They all depart except for Julie and her inseparable companion, Donna. They are on a high; Julie has taught something to sir, something he has never seen before, something he does not quite understand, and even lunch suddenly seems unimportant.

We look into other possibilities. The same approach works for 40 minutes and for 10 minutes, but not for 30 minutes.

We try to write the method. A flow chart appears:



And there Julie leaves me (and you) with the question "But why?" and the very 1985 instruction "Investigate further!"

But for Julie, mathematics will never be the same again. She has made her great discovery!

Maybe "Julie's Rule" will not go down the ages alongside Pythagoras's Theorem, Pascal's Triangle, Fibonacci's Sequence and Archimedes' Principle. But I am sure that her elation equals that felt by any of these famous personages. Suddenly the tale of Archimedes dripping along the streets of Syracuse seems credible - though Julie would no doubt do it far more daintily!

Christopher J. Cox is head of mathematics at Hush Episcopi School, Somerset. He is author of *Practice Papers in Mathematics* (Stanley Thorne) and co-author of *Understanding Mathematics* (John Murray).

Quality algebra

Algebra through Practice, by T S Blyth and E F Robertson, is a six-part collection of problems, with solutions, suitable for undergraduates and bright sixth-formers. The first three (Cambridge University Press, £3.50 each) deal with Sets, relations and mappings. Matrices and vector spaces, and Groups, rings and fields. The whole, searching and illuminating, represents a teaching quality.

Mathematical pastimes

1 Making patterns

by Donald Eperon

Several years ago, while visiting a primary school in Midhurst, I found that the infants class teacher had several mathematical games and pastimes which the children enjoyed using, as they developed their knowledge and understanding of the language and basic concepts of shape and number.

One tangible aid consisted of a small wooden box about four inches square, into which could be fitted sets of identical flat plastic pieces, each set forming a square, such as those shown in Fig 1.

The set of four right-angled triangles could also be used to make other symmetrical shapes by fitting pairs of equal sides together. Some are shown in Fig 2. Can you find at least ten more shapes - parallelograms, rectangles, trapezia, quadrilaterals, pentagons and hexagons?

Apparatus that young children can handle is of greater educational value than the conventional visual aids - the coloured charts and diagrams on the blackboard - though these are indis-

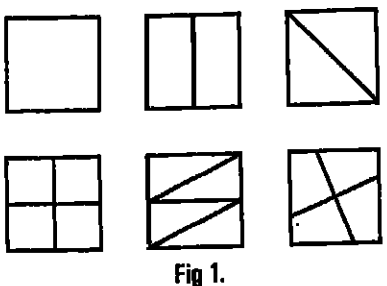


Fig 1.

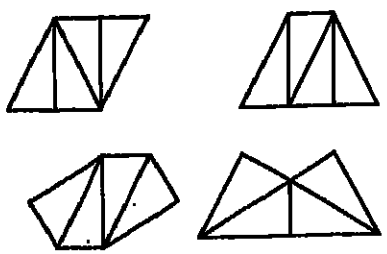


Fig 2.

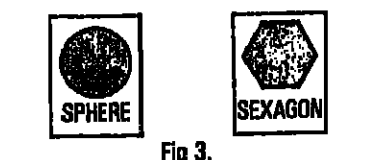


Fig 3.

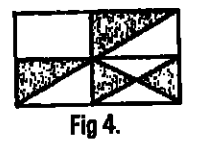


Fig 4.

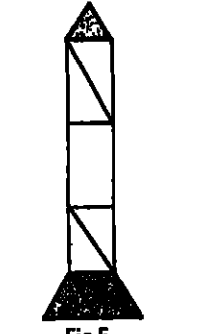


Fig 5.

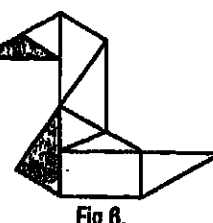


Fig 6.

Basic revision

General Mathematics: Revision and Practice. By D Rayner. Oxford University Press £3.95. 0 19 914242 4.

Revision Study in Mathematics. By C H Hopkins. John Murray £3.95. 0 7195 5186 7.

That the contents of these books (both in terms of subject matter and arrays of exercises) bear a familiar look is not a reflection upon the skills or judgement of the authors. They have prepared works which are appropriate for the later stages of a secondary school course leading to GCE or CSE. Revision rather than the introduction of new materials or ideas is the keynote.

To this end, the stress is on recapitulation of definitions, rules and processes which should have been inculcated, if not fully assimilated, in earlier years. A plethora of exercises (many worked to illustrate methods), including an adequate supply of examination type, is accompanied by answers.

The books are not, however, in a mould completely identical to that of their host of predecessors. Mr Rayner's pages, for example, carry at the head of each of its 11 sections a potted biography of a famous mathematician. References to the major achievements for which the subject is renowned are sometimes accompanied by a note of his personal quirks.

It can be hoped that pupils will be inspired to learn more about Gauss who "would not have understood the modern algebra" and by many, that mathematics must somehow be useful

to be worthy of study". And what of Pythagoras who "formed a mysterious brotherhood with his students who were bound by an oath not to reveal the secrets of numbers", or Leibnitz ("a phenomenal child prodigy"), or Newton, "thought by many to have been one of the greatest intellects of his times" who was "very secretive"?

One other quotation suggests the lively approach of this text. As an aid to memorizing the definitions of the trigonometric ratios, there is offered a splendid phrase: "Silly old Harry caught a herring trawling off Afghanistan".

The work by Mr Hopkins is considerably less than half the size of Mr Rayner's, but there is to be a companion volume concentrating on practice materials for students preparing for examinations. It may be deduced that the present book takes pupils up to the finishing post. It is indeed adequate for this, and it contains more than a great number of CSE candidates could cope with.

Again, the pattern of the book has its special appeal. Basic revision, in sections, titled Number, Money and Measures, Shapes, and Algebra is provided by notes and tests of fundamental facts. Part 2, about two-thirds of the book, concentrates on topics in problem form, for example, the calculator, probability, latitude and longitude, transformations, and matrices. In both books the layout and printing are notably good.

Mathematics at Work (in 2 volumes) and Everyday Maths both seek to set maths for CSE level and below in everyday, out-of-school contexts. Maths at Work takes the most useful line of developing a range of mathematical topics, dressing them up with as much context as possible. In contrast,



Fig 7.

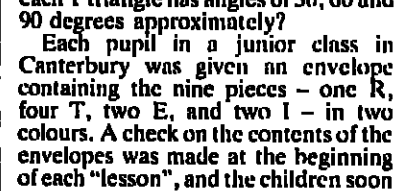


Fig 8.

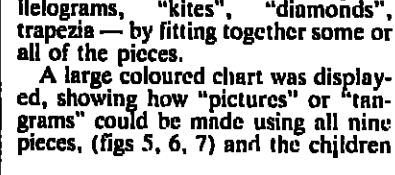


Fig 9.

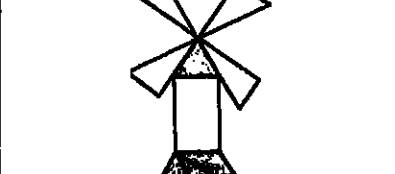


Fig 10.

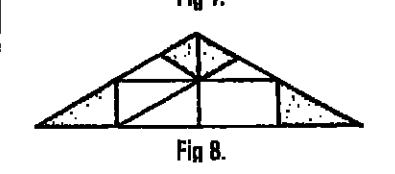


Fig 11.

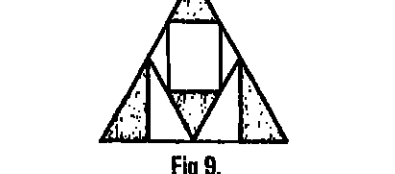


Fig 12.

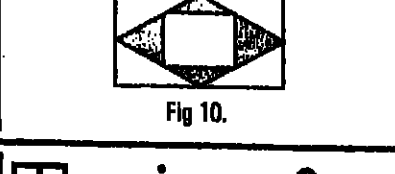


Fig 13.

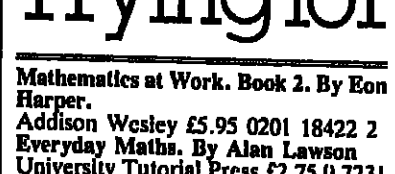


Fig 14.

Trying for relevance

Mathematics at Work. Book 2. By Eon Harper. Addison Wesley £5.95 0201 18422 2.

Everyday Maths. By Alan Lawson. University Tutorial Press £2.75 0 7231 0861 7.

Mathswise. Book 1. By R Allan and M Williams. Oxford University Press £2.95 0 19 834767 7.

"What use is this?" is a question most maths teachers have heard a good many times from pupils doubtful about the value of (for example) matrices or quadratic equations. No less an authority than the Cockcroft report places great stress on context and application. Making maths relevant and interesting is a goal which many teachers pursue with commendable zeal.

The question is relevant to whom? Should we focus on the pupils' interests and activities now, or as they may be when they leave school? Or should we focus on the adult world? And should we find contexts in which a mathematical topic is seen at work, or should we take a real situation and see what maths is involved in it?

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were encouraged to invent their own. Another chart showed how to make symmetrical patterns (figs 9, 10, 11). The jigsaw puzzle encouraged their interest, and was rewarded well to the challenge to make the outline shapes (figs 12, 13, 14) by fitting together all nine pieces and to invent their own puzzles.

The children recorded in their "exercise books" the shapes and patterns that they discovered, and colour them as they wished.

Experiments in fitting angle together in pairs or threes showed the acute angles of a T triangle were one third and two thirds of a right angle, and that the obtuse angle of a triangle was four thirds of a right angle.

Since two E triangles make the same "diamond" shape as two I triangles, each of the four triangles covers the same area - one quarter of the area of the rectangle R. One period a week was used for this pleasurable activity, and by the end of term every child had acquired some basic geometrical ideas.

They regarded this kind of activity as a game or pastime, and it certainly seemed to provide a better introduction to geometry than the study of "watered down" version of Euclid's Geometry that I endured at a preparatory school during World War I, when one was expected to learn by heart the contents of Book I.

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Primary Mathematics software is now
very varied in nature. The set of
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different learning contexts.

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grams linked to the secondary school
SMILE project. The programs vary
considerably in difficulty and content.
So most could be used in primary
schools quite profitably. Though pub-
lished within the SMILE project, the
software can be used independently
alongside other materials.

The learning contexts include inves-
tigations, games, and skill practice in
both number and geometry. *Angle*
gives practice in estimating angles,
best suited to use by pupils on an
individual basis. *Factors* is a novel



7-11

game played against the computer
preferably by a small group of pupils.
It involves practice in finding factors,
coupled with the development of
strategic thinking. *Boxes* is an activity
in which two-digit numbers have to be
put in order. It can be played by a
single pupil but would make a good
focus for class discussion.

Versions of several old favourites
are included in the collection. There is
Master, a version of *Mastermind*, *Frog*,
the classic frog-hopping investigation,
Nim, the well-known game, and a river
crossing puzzle. It is nice to see a
computer version of the vector racing
cars game in which cars race round a
track following a sequence of vectors.
The simulation of acceleration and
braking is simply achieved by restrict-
ing changes in vector components to
plus or minus one. *Racegame* has an
advantage over the paper and pencil
version in that it reminds you of your
previous vector and also prevents
disputes between pupils over the rules!
However only two players or teams can
play and you cannot design your own
tracks. So it's not a *Brands Hatch*.

The range of difficulty is consid-
erable. The easiest activity is *Minze*,
where you solve a simple maze on the
screen, the hardest (for us, at any rate)
is *Vecimeet* which is a tricky puzzle
involving transformations of vectors.
So the age range seems to be six to 16.
The accompanying booklet gives an
indication of level of difficulty together
with a brief synopsis of each program.
Both *Micro Smile* and *Mathematical
Games and Activities Volume 1* are
much cheaper than software generally
is. This is because many of the de-
velopment costs have been borne by
MEP. So they represent remarkably
good value for money. If your school is
a member of the Capital Region
consortium comprising ILEA and sur-
rounding boroughs, then the price is
even lower.

Anita Straker programs were
developed under the Microelec-
tronics Education Programme a couple of
years ago. Some readers may already
be familiar with them. Volume one
contains *Gustiner*, *Conceal*, *Toyshop*,
Flags, *Change* and *Abacus*. Further
volumes are in preparation to make
available the remaining primary school
programs in the original set.

Most programs are games for two
players or teams. They provide a visual
representation of some aspect of num-
ber work. As with all computer games,
they act as a referee thus reducing the
amount of supervision needed. *Gustiner*
is a game providing practice in

recognizing multiples of numbers.
Rather than merely asking drill-type
questions, pupils are effectively pro-
voked into working out multiples as
part of their strategic planning in
playing the game.

Abacus is different from the other
programs on the disk as it is a demon-
stration/discussion aid for the teacher
to use. It draws a spike abacus on the
screen and allows the teacher to move
the counters around. Though a real
abacus would seem to be a much more
effective visual aid, *Abacus* will draw
abacuses with different numbers of
spikes suitable for different number
bases. So it saves you having to have a
whole drawer full of real abacuses.
Also its ability to count by itself
enables it to be used with individual
children for certain practice activities.

Fernleaf is a relatively new software
company which has now built an
interesting collection. Some of its
more imaginative titles are *Fletcher's
Castle*, *Games of Deduction* and *Vik-
ing England*. *Arithmetic Plus*, however,
is very much concerned with practice
of routine skills. The first of the four
programs, *Find the Question* is a game
for two teams. Each team has a figure
who slowly walks along a track. If the
figure lands on a lucky square, the
team is offered an arithmetic question
such as $6 \times 7 = ?$ *Bridges* is a more
interesting context, again based on
finding answers to "sums".

Treasure and Product Patterns in-
volve more mathematical thinking.
The designer suggests that the pro-
grams be played by small groups rather
than individual children. The latter
two programs would give the groups
more scope for discussion than the first
pair. The age suitability is certainly
within the suggested range 7-12.
Further *Arithmetic Plus* programs are
in preparation.

SPMG Software is published by the
same source as the well-known SPMG
Mathematics scheme for primary
schools. As with the SMILE programs,
the link with the published materials is
a tenuous one. The programs can be
quite happily used as totally separate
items. The four packs reviewed here
are *Issue One* and further issues of
software are expected.

In contrast with the programs men-
tioned above, two or three of the
SPMG programs include a "moving
book" phase. That is, part of the
program presents information and ex-
planation for the user to read. How-
ever, unlike a book, the programs
attempt to involve the reader in a more
interactive way by asking questions.
The *Area* programs are most like this.
Diagrams are drawn, then the text on
the screen explains about them. The
diagrams change to keep pace with the
text. The pupil is asked a question
from time to time to keep in touch.
Area worksheets are provided in the
accompanying booklet.

Frog-hopping and postman popping

continued

The sheets are to be photocopied
and used by the pupils. Two programs
on the *Area* disk are supplied to do the
marking! Instead of the teacher having
to take a pile of worksheets home, the
program asks the pupils to type in their
answers and they are told whether to
put a tick or a cross. No feedback is
given, pupils are trusted to go to speak
to the teacher to discuss their mistakes.

The *Metric units of Weight* pack
again involves a fair amount of textual
material discussing the choice of units
for different types of measurement.
On the other hand *Postman* is entirely
visual. This activity gives practice in
simple sums. To live up to the work, the
screen is full of moving vans into which
postmen have to be popped. Adults
with slow reflexes would find this
infructuous as they would spend so
much time watching their postmen get
run over, they would never get to have
their "tables" practised. Children have
less trouble dealing with this pseudo
arcade game format.

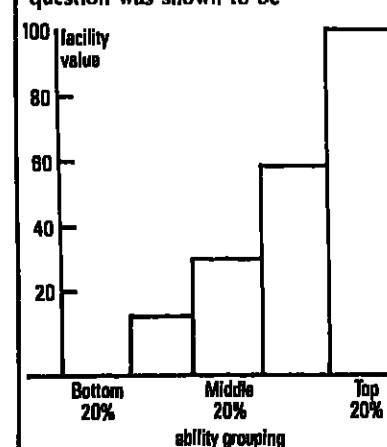
The majority of the SPMG pro-
grams seem suited to individual pupil
work. Only the *Shape* pack contains
programs which would provide mate-
rial for a group of children to cope with
together.

Though these four collections of
programs can be used in many dif-
ferent ways, they are all "instructional".
That is they are all concerned with
asking pupils questions and checking
on right and wrong answers. And
incidentally, they invariably leave the
job of remedial attention to the
teacher. None of this batch offers the
pupil a "tool" to use, for example to
draw mathematical shapes, perform
calculations, or produce graphs. This
aspect of computing is very much
neglected. Having said that, the above
programs are generally well written
and represent good quality software of
the instructional type.

Andrew Rotheny and
Silvia Thistle

Are there some mathematical con-
cepts which are beyond the reach of
many children? Evidence suggests that
there are and with such there must
come implications for the curriculum
and forms of assessment. As a former
professional mathematician, recently
turned teacher, I was horrified by the
response to our borough test for the
12-13-year-olds. They were asked to:
"Write this fraction as a decimal."

Slightly over 40 per cent of all the
children answered this correctly. A
further analysis of the results proved to
be more illuminating than a mere
average. This showed the facility
values for each 20 per cent of the
ability spectrum. A graph for the
question was shown to be:



In other words, about 90 per cent of
the top 20 per cent correctly converted
 $\frac{1}{4}$ to a decimal, whilst none of the
bottom 20 per cent did so.

Projected on to the usual organiza-
tional pattern for most second or third
forms, this means that hardly any
pupils from set three downwards seem
to understand the relationship be-

A chance to succeed

Michael Boydd considers minimum criteria for assessment

would be defined: the Cockerfoot
Foundation list, for instance.
What minimum expectations
should society have of the top
grade candidates?

2. What would be the form of assess-
ment?

Would it be traditional written
papers? Would there be any
practical testing? How about an
oral component? Perhaps some-
thing on open-ended investiga-
tions. Would we allow for course-
work and teacher or school based
assessment?

3. What would each person actually
do?

Would the potentially top grade
candidate have to demonstrate
mastery at the lower level? Or
would we have a system as in the
Olympic high-jump where the
best people only come in at a
higher level? Do not forget that a
failure at the higher level means
they lose the competition.

Attractive as the graded tests may
be, answering these questions cannot
be easy, and there are other obvious
drawbacks. For instance, if we had
seven grades, with grade seven as the
lowest, then by definition some pupils
would not achieve beyond grade
seven. So we might easily see the
formation of sink groups and a tenden-
cy to aim for an ultra high setting or
streaming system. Surely one of the
problems with the bottom end fourth
form on a wet Thursday afternoon is
precisely that they know that they are
the bottom end. They then perform to
the expectation which they believe
everyone has of them. Another major
drawback in the introduction of the
graded tests approach is that it could
lead to an increase in the tendency to
teach people to do the tricks that get
them through tests.

When I was teaching in the univer-
sity sector, it was very obvious that we

took in students with high grades in A
level mathematics. They were excel-
lent at answering A level questions but
pretty hopeless at thinking mathemati-
cally. They had been well trained to
jump over hurdles or pass through the
hoops that led to top grades. For my
sins I have to confess that a similar
modus operandi could give them a high
class degree. It does therefore seem to
me to be crucial that, if mathematics is
to become more relevant to more
people, then we need to develop it - at
all levels - along the investigative,
problem solving and process based
lines. In this way we might start to
teach people to do things with it, feel
its beauty and value, and stop teaching
tricks to get over hurdles. For the
weaker pupils, the aesthetic side of
mathematics is often ignored. Showing
them the beauty and value of the
subject is itself no mean task, but one
within our grasp. If any development
in school assessment simply presented
more hurdles to be overcome, then it
would be a disastrous step.

Coming into school teaching after
many years in the university sector,
one thing hit me hard. At the univer-
sity I had a degree of choice in what I
taught. I chose the questions for the
examination and the responsibility for
assessing students' work was primari-
ly mine. Naturally, colleagues and
external examiners were used as part
of a support and check mechanism, but
essentially I always felt that there was a
good deal of trust in my professional
judgement. I do not have that feeling
about the situation at school. In gen-
eral, teachers have very little say in the
grades awarded to pupils, other than
on some mode 2, 3 and coursework
schemes. This is to me, essentially a
lack of trust which may or may not be
justified but which - even though it
might mean an enormous in-service
programme - needs to be rectified.

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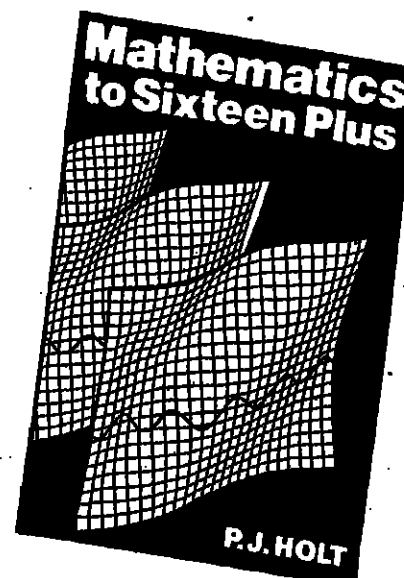
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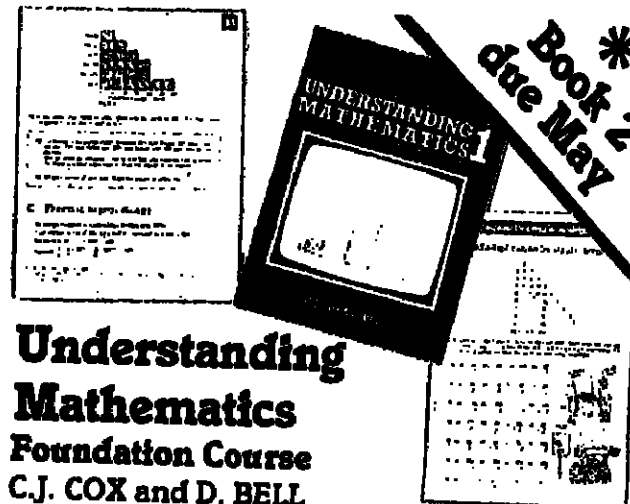
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A chance to succeed

continued

Everyone seems to want to improve the quality of mathematics education we currently offer our children. There seems to be a general consensus of opinion that this will only occur when we change the assessment programme at 16-plus, the feeling is that the content of the assessment becomes the effective teaching syllabus. These factors being so, then I would like to suggest that we have some minimum criteria for future assessment models. I do not profess to know all of the answers, but as a starting point I suggest:

1. that the form of assessment is such that it encourages us to teach children to think mathematically and use mathematics in solving problems relevant to themselves;
2. that the assessment model is such that it fully reflects the whole position and nature of mathematics;

(These two criteria would, I hope, stop people being seen as good at mathematics simply because they have been well

trained in standard solutions to standard problems; in other words, because they have learned the tricks.)

3. that we must promote systems which stimulate a greater level of trust in the teacher's judgement of a pupil's worth; even though such judgement must be open to internal and external monitoring;
4. that there should be opportunities for the assessment of coursework, investigative and problem solving work, practical and oral work;

(If we do not do this then all of the elements of good practice highlighted in Cockerott's paragraph 243 will not become a reality.)

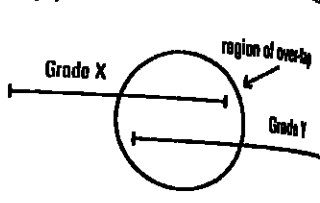
5. that we need a realistic measure of what is the minimum level of achievement that we can expect from pupils in state education.

(And thereby give every pupil an opportunity to succeed.)

6. that any decisions we make about which test a pupil might take are either left until as late as possible, or taken in consultation and co-operation with the child.

I am convinced that the too early pigeon-holing of children in examination classes is detrimental to their

mathematical development. In many cases such decisions could be left until a lot later than they are. This would move the focus of the assessment away from a graded criteria approach to a more open approach. Perhaps the diagram below illustrates my point:



Of course, I take it as axiomatic that it is good practice to give children today an opportunity to discuss and negotiate their own futures.

As a class teacher I shall not be involved with future policy decisions. However, I hope that the policy makers create a model which helps me to create a stimulating positive atmosphere in all classrooms. I rest believing that there is no real reason why the ability fourth and fifth years should not enjoy mathematics and be stimulated by it.

Our mutual dilemma

by Robert Tauber and Michael Cornelius

England and the United States have for many years faced a serious shortage in the number of mathematics teachers who are qualified, as well as willing, to teach. The severity of the situation calls for some innovative solutions.

A recent United States government report, *A Nation at Risk*, describes the mathematics teacher shortage as "severe", with 43 out of 45 states surveyed citing shortages. Statistics from selected states show an equally bleak picture. For example, in California, the Los Angeles Unified School District alone estimated that it needed 600 new or replacement mathematics teachers in 1983. Yet, of the more than 400,000 students enrolled in California's public four-year colleges or universities in the Spring of 1982, only 97 were actually preparing to be secondary school mathematics teachers. In the state of North Carolina only 55% of all the state's mathematics teachers are qualified or certified to teach the subject. The situation is even worse when one considers the Journal for the Maryland Council of Teachers of Mathematics' recent report that only 55% of the graduates prepared to teach mathematics



actually entered the teaching profession.

In England, in 1985, the Advisory Committee on the Supply and Education of Teachers (ACSET) argued that the output of mathematics teachers will have to grow by 20% by 1993 and that the growth might need to be greater if more mathematicians are used as teachers of computer studies. The committee concluded, "It seems unlikely that such a goal could be achieved without radical new approaches to the recruitment of suitably qualified students."

Our mutual national dilemma should not be misinterpreted as just one of not having enough bodies to staff mathematics classrooms. The bodies are there but they often do not possess adequate mathematics credentials. The US report, *A Nation at Risk*, found that half of the newly employed mathematics teachers were not qualified to teach their subject. Even among those who are certified to teach mathematics, arguments such as those put before Iowa's professional standards commission late in 1984, suggest the requirements for obtaining certification should be significantly increased.

The Cockerott report suggests that in England, among secondary mathematics teachers 33% have "good" qualifications to teach their subject, 29% are "acceptable", 17% are "weak", and 21% have "no" qualifications. It is pointed out that the lessons taught by this last 21% amount to 178,000 periods each week representing a full-time contribution by more than 5,000 teachers.

The mathematics teacher shortage problem is further compounded by those who leave the profession early. A survey of two L.E.A.s in Northern England in 1980 showed that within a year 26.8% of mathematics teachers in secondary schools left teaching for posts outside teaching, or because of illness, personal reasons, or failure. Over three quarters of these teachers were holders of Scale 1 posts with a median number of years teaching of only 2.7.

The resulting shortage of mathematics teachers is not a recent phenomenon either in the US or England. Testimony before a 1983 US commit-

tee on Labor and Human Resources revealed that, "With the exception of one or two years (1969-70) there has been a documented shortage of qualified mathematics teachers for the past 40 years in this country."

The impact of these shortages is widespread. A Centre for Public Resources report, *Basic Skills in the US Work Force*, revealed that nearly half the businesses responding to its survey identified employee mathematics deficiencies across a broad range of job types. Terminology such as "calculus decline" and "deleterious effects" captured the flavour of a 1982 State University of New York symposium on the effects on technology of a vanishing species - mathematics (and science) teachers. The impact of the mathematics teacher shortage, and its accompanying effect upon the quality of teaching and thus quality of secondary school graduates, is likely to continue to affect all walks of life if we accept a 1983 US Census prediction. They state that over the next twelve years there will be more than a 25% reduction in the number of 18 to 25 year-olds, and thus intense competition will exist at every employment skill level for the smaller pool of better performing students. A similar reduction in the number of 18-25 year-olds is to be expected here in England.

The impact of the mathematics teacher shortage in the USA on quality of instruction is further revealed among the limited career options available to university bound secondary school graduates. A recent University of California survey showed that 92% of the women and 43% of the men in the freshmen class had already disqualified themselves from three-quarters of the possible majors for lack of sufficient mathematics.

Numerous solutions to the mathematics teacher shortage have been identified - some likely to gain universal support, some likely to see sides being taken. The Houston Independent School District has made headlines by offering "salary supplements" for mathematics (as well as science and bilingual) teachers called the "Second Mile". Houston rewards professionals who teach in areas of

Our mutual dilemma continued

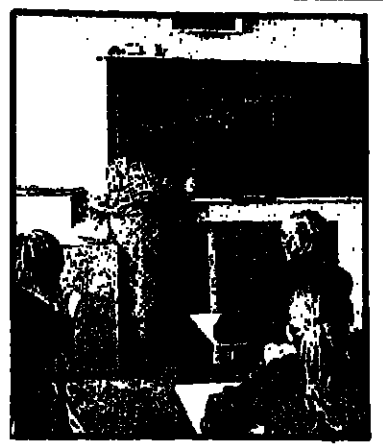
critical teacher shortages. In England, the Cockerott report refers to these salary augmentations as "financial incentives". Proponents of higher salaries for mathematics teachers argue that such salaries are simply market sensitive. They are necessary to recruit, as well as retain, qualified mathematics teachers.

Opponents argue that paying salary supplements to mathematics teachers only serves to reallocate the finite number of qualified teachers available. It only robs Peter to pay Paul. The real problem is how to increase the pool of qualified mathematics teachers, a task made more difficult by a never ending circle. Inadequately or inappropriately instructed students in mathematics foundations form negative attitudes towards mathematics. In turn, they are less likely to pursue mathematics subjects, let alone teaching mathematics as a career. Who then, no matter how much money is offered, will be available to strengthen tomorrow's pool of qualified mathematics teachers?

Teacher associations, both in the US and England, criticize and oppose any differential salary scale tied to subject areas, arguing that all teacher salaries should be raised to a level that will attract and retain qualified candidates.

In a 1983, American Federation of Teachers' position paper, the only point highlighted by complete underlining was one stating, "The American Federation of Teachers does not believe that bonuses or salary differentials offer an appropriate solution to either... teacher recruitment (maths and science) or teacher retention..."

Another recruiting solution tied to economics is to have schools work with local industries and have them offer summer employment to mathematics teachers (for example, to cover employee vacations) as a way to augment their annual salary. Industries would be motivated to participate for at least two reasons. First, they would have access to a talent pool, on a part-time basis, second, by attracting more qual-



ified mathematics teachers to teach in local schools, graduates from these schools would be better prepared in mathematics - skills often needed even for the most basic jobs in today's industries, as well as for success in many university studies. The one fear expressed by school officials is that once mathematics teachers have worked in industry for a summer or two, they may find it so rewarding that they might quit teaching and work there full-time. Thus, a short-term solution could become a long-term problem.

Industry-education efforts at cooperation can be expressed in still other ways. In Louisiana a proposal has been made to grant tax breaks to industries who release employees to teach in public (maintained) schools. Opponents question whether these teachers will possess the necessary teaching methods and whether this will be a door-opener to the use of still other non-certified personnel in place of contracted teachers. Fragmented school staffs, confusing working conditions and schedules, siphoning off the "cream of the crop" students, and disincentives of full time teachers to stay on the job are among other possible impacts cited.

Another solution seen as new in the States, but taken for granted in Britain, is that of providing grants (or partially cancelled loans) to students who pursue mathematics teacher education in college or university. The

idea, similar to that used in the US under the National Defense Education Act of the late 1950s, would have candidates, in return for a grant, promise to teach mathematics for a minimum number of years. A drawback here is that such teachers, just beginning to come into their prime, meet their minimum teaching commitment and then leave the profession. In England a system whereby highly qualified graduates were given enhanced grants as PGCE students was tried recently but quietly abandoned.

Additional solutions include urging retired teachers to return, having schools share mathematics teachers, compensating current teachers who take on additional teaching assignments, and redeploying teachers scheduled for layoff or redundancy. Whereas in England teachers of other subjects are often redeployed to teach mathematics with no preconditions about the obtaining of suitable qualifications, in the US redeployed teachers must take the necessary coursework to earn a mathematics teaching certificate. With the latter solution a school district or L.E.A. can end up with a mathematics teacher who is mature, knowledgeable of the system, and skilled at working with children. On the other hand, does such redeployment of teachers result in lower standards? Will some of these teachers simply bide their time until they have enough seniority to go back to teaching the subject that was their first love?

The evidence that there are simply not enough mathematics teachers qualified, as well as willing, to teach is overwhelming. Unless solutions are found the shortage is likely to grow still more acute on both sides of the Atlantic. It might well be useful for both to examine further each other's attempts to try to produce an adequate supply of qualified mathematics teachers.

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Means and ends

David Playfoot on frameworks for continuity

I always find it interesting to observe the way in which children treat mathematical apparatus. It can often show you how they approach problem solving or their ability to cooperate in a group or simply whether they are well coordinated; but looking around all these and thus defining the framework, is the child's direct physical response to the materials themselves. At the start of the term or at any time when a child moves into a new class or school one can gain a fascinating insight into mathematical continuity by watching this response. For example, give the child some problems involving decimals to three places and a box of Dienes multibase as a practical aid; chances are, she will do one of three things: use the apparatus to help find the answers, make castles or towers with it and work out the problems on paper or ignore the apparatus altogether.

There are many schools where "making towers" would be the general response in every class; of course, such schools might well have genuine continuity in their teaching styles and in their approach to mathematics; but a steady progression through graded workbooks filled with pages and pages of "sums" is not the sort of continuity I favour. One must always ask first "What sort of continuity do we want in our school?"

There are a number of automatic assumptions concerning continuity which must be considered but equally there are some, perhaps, less obvious factors which are crucial if the term is to have any real value to mathematics teaching.

If we accept that one of the aims of mathematics teaching is to "enrich children's aesthetic and linguistic experience, provide them with the means of exploring their environment and develop their powers of logical thought, in addition to equipping them with the numerical skills which will be a powerful tool for later work and study" ("Mathematics Counts" para 287) and we then go on to define in some detail ways of achieving this, then we have already begun to build in continuity from class to class and school to school. Aims and objectives can, therefore, give the necessary framework for continuity.

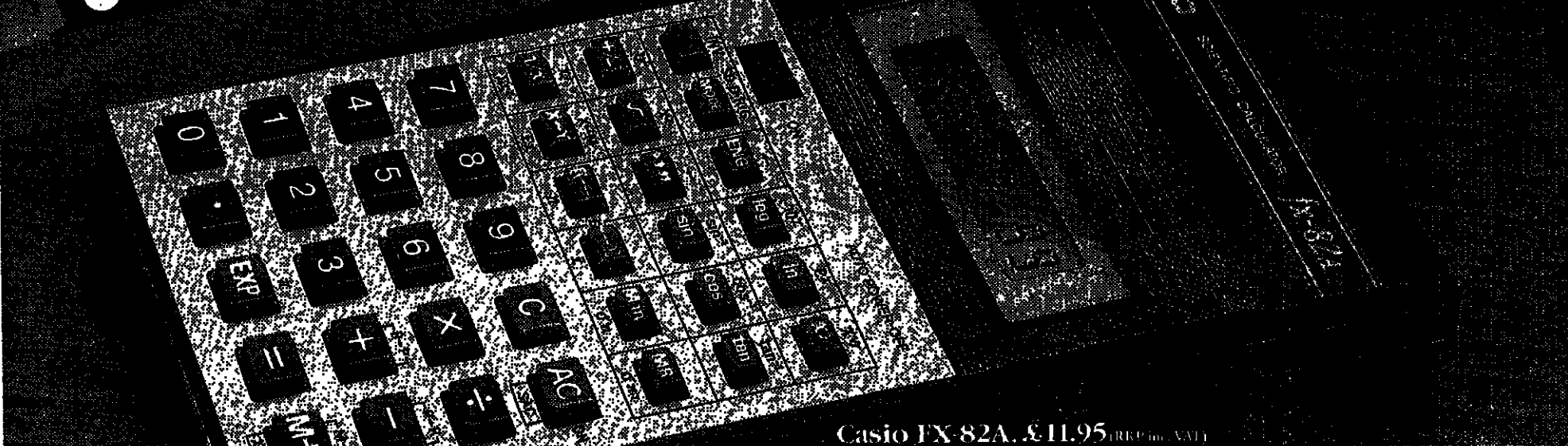


Continuity and assessment are frequently bracketed together for obvious reasons. If formal and informal patterns of assessment are agreed and followed by teachers then a further strand in the continuity web is in place. Well developed systems of assessment and record keeping are vital in maintaining continuity.

Record keeping is a minefield! There is overkill, usually represented by an explosion of "ticks" in boxes and a piling up of clippings in projections given to the head of department or head teacher; further down the line is the list of children's marks and the wave of a teachers' manual. For records to be meaningful to others and to help monitor progression they need to be devised to carefully match a scheme of work or guideline. Most importantly records must be seen to serve a purpose for the teacher; they should give indications as to future teaching, include assessment as well as monitoring progress and use a clear layout which enables speedy filling in.

At a group level, whether it be class, year or school there is a need to match progression against previously defined aims. Progression is frequently haphazardly

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Catching them young

Early learning maths materials surveyed by Susan Thomas

I once had a headmaster who swore he only remembered his tables because as the class chanted the daily round, his form teacher literally beat the elusive numbers into his head with the flat of his hand. It was, I suppose, all good educational stuff - tactile, experimental and effective - but it left him with a lasting fear of mathematics.

Happily most of the Early Learning materials in this review combined all those things with a measure of enjoyment. There were pre-school books to read, colour in or cut out, computer software for home and school, and starter maths series for nursery, reception and infant classes. All tried to make learning pleasurable and most succeeded.

First, though, no review would be worth its salt without a mention of Galt Bricks. Based on H.G. Wells' nursery bricks and made in polished natural beechwood, they provide a modular building kit for almost any age (parents love them) which can be used to make paths, mazes, Norman palaces or space stations. They promote language development, encourage imaginative play and develop an understanding of solid shapes, functions and mathematical concepts. There are cubes, cylinders, cuboids, arches, triangular prisms, halves, quarters and thirds. A box of 30 costs £8.45, a hessian bag of 60 £17.95 and a playgroup sized bag of 90, £25.00.

Still on the nursery front are two series from Walker Books: *Number Play*, six square, shiny, wordless ziggzag books by John Burningham at £2.50 each, and a quartet of neat, hardback *First Maths Zebra Books* at 75p each. John Burningham is the master of the mathematical disaster story. Cats, pigs, cows, kids, climb on or fall off things, drop numbers or join forces to demonstrate sequences, addition, subtraction and sets. And every lifted flap tells a story. Ideal read and cuddle books, their wry humour pleases most adults and the grosser comedy has the tines rolling in the aisles.

The stories grew on the two to four-year-olds. They loved the detailed pictures and rapidly adopted the role of story teller but, like me, they found the books as hard to fold as an OS map and the tiny cardboard closure tabs were torn instantly.



Three and four-year-olds loved the Starter Maths books

The Zebra Books got a mixed reception, mainly, I think, because the adults hated the main character, a green and spotty monster; a shame, because the proliferating farm animals which filled the plot and cumulative shapes were quite appealing, especially to those at the "count everything in sight" stage.

Froggy Football, one of a series of six Dragon Paperbacks from Granuda (95p), seemed like a good idea, teaching number bonding with humour, rhyme and topicality. But it tried to do too much. Good ideas went undeveloped and both story and rhyme changed disconcertingly. The latter with potentially disastrous mathematical results ("They are called the Froggy Four. One and one and one (and one) make four"). With more editing it could be a winner.

And so to school with ten Starter Maths (*Kitchen, Garage, Toyshop*, etc. £1.95 hardback, 95p softback) from Macdonald Educational, who get almost everything right. The bright, detailed illustrations are guaranteed to stimulate discussion about shape and number, weights and measures, symmetry and mechanisms. Variety in style, subject and points of departure.

Macdonald also produce four home Workbooks (95p each) to reinforce classroom experience with plenty of counting, ordering, colouring and symmetry games, even the odd page of Time and Money. Best of all is the careful introduction for parents with its precise information about the theory and practice involved on every page.

Worth a mention too is Ed Catherall's *Investigating Numbers* (£3.95 from Wayland). One for the bookshelf it will brighten life for budding mathematicians bored with counting pencil lengths and ripe for a romp round Fibonacci, the pyramids and the binary system.

And so to the real blue chip education stuff - *Macmillan Mathematics* (5-8) at £95.00 and CUP's fortuitously titled *IMP (Infant Maths Project)*, Units 1 and 2 at around £50 each. Both beautifully presented, impeccably researched and inevitably, major items of expenditure for any school.

Macmillan Maths is an immensely businesslike affair in four levels with 11 sets of high gloss, illustrated work cards (both sides), check cards, 23 precisely informative teacher's workbooks and an essential "Scope and Sequence" chart detailing the concepts, practice and vocabulary used at every stage.

I asked Anita Hemion, headmistress of Shipbourne Village School, for her opinion. She was particularly impressed by the Time unit, the exciting work in Area, the tactile approach to First Level Shape and the broad and thoughtful use of mathematical language. Her only reservations about this very comprehensive scheme, and she stressed they were details, concerned the omission of Tessellation and the Seasons, the absence of colour on the children's workcards, the extraordinary amount of apparatus required and the failure to indicate which cards could safely be left out in an overcrowded timetable. My criticisms are more of spirit than of flesh; the use of "he" throughout the teacher's notes and a certain earnestness about the

work cards - plenty of words, little colour and less humour.

IMP, on the other hand (a series designed to stand alone or as a precursor to SMP) is fun from the word "go". Based on the premise that children learn best through activity and interaction with real teachers rather than the written word, it has enlisted all those things that small children hold dear - bright colours, humour, games, rhymes, matching, ordering and perhaps the most vital mathematical skill of all, pattern recognition. And to my mind it wins hands down.

Every concept is introduced by the teacher. Thus the numerals 1-5 are shown, held, described and drawn. Then they become a focus for matching sets, number recognition, finger games, sorting, listening (How many claps?), feeling, modelling and movement.

Given that all these things happen in any good infant class, the merit of the series is that they happen in a structured way, a cheerful mathematical progression reinforcing each concept in a multitude of ways. As for the profusely illustrated teachers' books, which are the core of the unit, they are models of clarity, accessibility and good practice.

Unit 1 has 14 teacher's books, 11 workbooks and 40 bright, sturdy, full-colour board and floor games. There are also a dozen beautifully illustrated, double-sided, number rhyme and story boards, equally suitable for display or group work.

Unit 2 has teacher's booklets, a structure chart and individual record cards, as well as permanent, full-colour, wipe clean workcards and a pack of 30 mathematical games.

I took the units to Front Village school for trial. The children couldn't wait to get started. Liz Dullaway and Sindy Everett, who both teach infants, were enthusiastic about the lively, human, yet structured approach and within hours it was clear that the competitive games were resulting in faster learning and a lot of genuinely mathematical language.

The teachers, who liked the series for itself or as a second string to the Nuffield maths they already use, appreciated the breadth of approach, the simple "apparatus" involved, and the mental maths. Take Zero. "How many children came to school by car, on foot, by aeroplane?" or "How many boys, girls, elephants in school today?" Their only criticism - the confusing use of the same colour for different topics on the workcard headers.

Also from CUP, the newly published *Think and Solve 1-4*, mental maths for 7-12 year-olds. Written in response to Cockcroft, the books give individual practice in the four rules, place value, sequence and real life problems. Attractively printed, nicely challenging, they come in paperback at £1.50 each.

And lastly, the Macmillan Spectrum Software (£7.95) for 4-8 year-olds. *MacMan* and the *Caber Eater* (addition and subtraction) *MacMan* and the *Great Escape* (area, conservation, estimation, and rotation) *MacMan* and the *Magic Mirror* (symmetry). Entertaining, instructive and compulsive, they make a good follow up to class work, need a fair bit of parent/teacher input and are worth any number of whacks on the head with a hard hand.

Get down to it maths

Macmillan Junior Mathematics. By Edith Biggs. Pupil's Book 1A £1.70, 1B £1.33, 369536-4. Teachers Book 2 £5.25, 369610-0. Pupil's Book 3 £2.50, 369637-7. In-Service Education. In *Primary Mathematics*. By Sister Mary Timothy Pinner and Hilary Shuard. Open University Press £6.50, 0 335 15023 3.

Anyone who has experienced the excitement and stimulation of working with Edith Biggs will recognize her strong influence on *Macmillan Junior Mathematics*. "Work with a friend. Make a weighing machine to weigh small objects. You will need a plastic yoghurt pot, a yoghurt pot, bottle tops, string, cardboard tubes - this is roll your sleeves up and get down to it maths. I have visions of classes of teachers on Miss Biggs's courses tackling the problems and her questions: "What do you notice?" "What happens when . . . ?" "How did you find out?" I hope this will extend to classes of children, with teachers using the books to inspire pupils into the role of questioner and facilitator. But life's never that simple.

This scheme goes a lot further than any others in tackling the problem of open-endedness. The pupils' books

constantly ask questions like "How did you find out?" "What do you notice?" "Describe the pattern", and there is no suggestion in the teacher's book that there is a right answer to the questions. The teacher's book advocates discussing with groups of children, listening to and observing them. There are also practical suggestions about grouping children to work together, following the Cockcroft recommendations about collaborative work, and the pupils' books often suggest "Work with a partner". How teachers handle all this obviously depends on their attitudes and experience, but we must rejoice that there has been a sound attempt to tackle an open approach within a scheme. Of course, there is no scope for children to go off into just any self-directed investigation, and by its very nature a scheme could not allow that. How could you then progress on to the next page?

There are many unusual and interesting approaches to different mathematical content areas. There is a section on mass that concerns balance and how and why objects balance. One activity is to make a paper dart. Much of the number practice arises from original games, activities and pattern-seeking, or else through practical measurement, as well as some lovely

pegboard games for different aspects of symmetry. One section is entitled "Fun with numbers", and there is a strong sense that what is to be enjoyable and challenging throughout these books.

Formal notation and algorithms are kept to a minimum - I suppose it would be too much to ask for them to disappear altogether. Edith Biggs believes that children should develop their own methods of calculation, mentally and written. A large publisher with pupils' books to produce must find it too difficult to cope with, so we're back to "use this method to do the following divisions". It's a shame that the children are not encouraged to develop their own recording on the lines of the Open University course *Developing Mathematical Thinking*.

I can't imagine many children being able to read the scheme. All that body of print? Answering all those questions just like that? No "What does it want me to do now, Miss?"? However, as far as I'm concerned, this is also a great advantage. We know that Cockcroft stressed that children cannot teach themselves maths by working alone through a textbook, and we also know that unfortunately that's what many children do. In this scheme the pupils' books must be a reference book for teachers in order to set groups of children off in their various explorations. I would use it in conjunction with the set of instant ideas for the next lesson stage. They then look more closely

at their teaching and at what they are teaching, and then start to ask "Why?" Finally, they reach the stage of reflecting on all that they do, and Sister Timothy suggests that most teachers who reach this last stage become the course providers.

The author quotes extensively from questionnaires and interviews with teachers, which is most interesting and readable. Clearly, when teachers know what they want, this isn't always what they need. The most forgettable and short-lasting courses are those that give teachers what they want in terms of tips-for-teachers, as opposed to those which cause fundamental changes in thinking. And teachers who have developed as a result of such courses need in turn to influence their school, and for this they need good support from the headteacher.

It is also clear from this book that INSET providers need support and help. "There is little training, or even pedagogic literature, available to help a new INSET provider. It is hoped that this book will make some contribution towards building up a body of literature focused on the needs of INSET providers." I'm sure it will indeed be invaluable to all primary mathematics INSET providers, from headteachers to mathematics coordinators within schools to Sir Keith's missionaries.

Sheila Ebbutt

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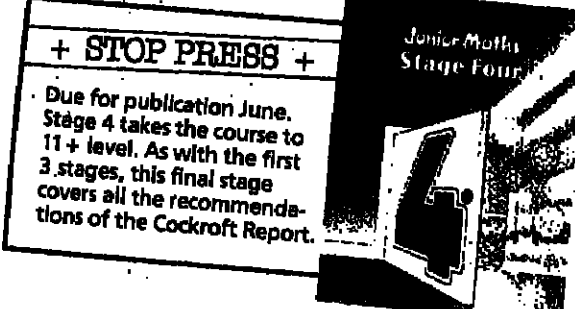
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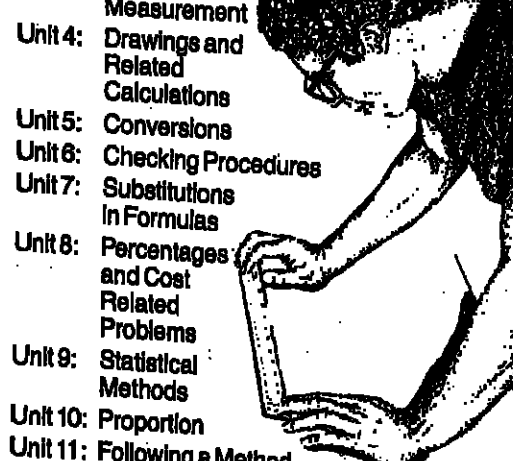
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MEI preparing for GCSE

by Douglas Butler

The MEI Schools Project was founded with the aim of presenting secondary mathematics that is relevant to the needs of both Education and Industry. It will be a natural transition to the more practical approach at 16-plus, and the preparation of a series of coursework assignments for the new examinations is well advanced.

Member schools in England and Wales at present enter candidates for MEI O level Mathematics, AO level Additional Mathematics and, with new syllabuses launched last summer, A level Mathematics and Further Mathematics. The Project publishes a range of support material including topic Monographs and Program for Mathematical Computing (for the BBC Micro); there is a termly Newsletter, and teachers attend area meetings to discuss matters of common interest including syllabus developments and recent examination questions. There is an unusually close relationship with the examiners, who attend the MEI Conferences and the AGM in London.

For the two years leading up to the introduction of GCSE in 1988, a joint O level/CSE scheme will be available nationally through the Oxford Local Delegation, in cooperation with the Oxford and Cambridge Board and the Southern and South-Western CSE Boards. This will give the member schools and the examiners valuable experience in the new structure of assessment, and there will be the chance to evaluate the proposals for MEI coursework assignments while they represent an optional part of the examination.

The Joint Scheme was developed through a carefully planned merger of the MEI O level with the Mode 3 CSE examination that has been running for several years in a number of member comprehensive schools in the South West. This scheme, which forms the basis of our GCSE proposal (for 1988), has been designed with five levels to give candidates a more flexible choice than they have with a three-level scheme. Level 3 includes a Paper 3 entitled "Extra Mathematics"; this has arisen from a recommendation in the Cockcroft Report that a paper be set for those who find the standard of the present O level relatively straightforward. This new paper is being offered to member schools this summer (to be taken with the 1985 MEI O level papers) in a pilot trial, to give some advance experience in setting and moderating at this level.

Candidates in the Joint Scheme will receive GCE certification from either the Oxford and Cambridge Board or the Oxford Local Delegation (except at Level 1) together with a separate assessed CSE certification from either the Southern or the South-Western CSE Board, according to the chart above. Paper 3 candidates will receive a separate certificate indicating "distinction", "merit" or "pass". Candidates may also be unclassified ("U") at any level. Levels 3 and 4 will also be examined in November of 1986 and 1987.

THE MEI JOINT SCHEME AT 16+				GRADES FOR 1986 & 87		SYLLABUS	
LEVEL	Optional Coursework	'Extra Mathematics' taken with Papers 3 & 4	PAPER 3	PAPER 4	Distinction merit pass	LISTS	
LEVEL 5	Optional Coursework		PAPER 3(1)	PAPER 4	GCSE: A, B, C, D, E	LISTS	1-5
LEVEL 4	Optional Coursework		PAPER 3(1)	PAPER 4	GCSE: 1, 2, 3, 4	LISTS	1-4
LEVEL 3	Optional Coursework		PAPER 3(1)	PAPER 4	GCSE: B, C, D, E	LISTS	1-3
LEVEL 2	Optional Coursework		PAPER 3(1)	PAPER 4	GCSE: C, D, E	LISTS	1-2
LEVEL 1	COURSEWORK	BASIC TESTS	PAPER 3(1)	PAPER 4	GCSE: 1, 2, 3, 4, 5	LISTS	1-2
					GCSE: 1, 2, 3, 4, 5	LISTS	1-2

(*) Papers 1, 2, 3 and 4 of the 6 Basic Tests are answered without calculator

The MEI Joint O level/CSE scheme, available throughout England and Wales in 1986 and 1987. The MEI GCSE proposal has been prepared using this scheme as a basis, in accordance with the National Criteria. It is shortly to be submitted to the Secondary Examinations Council for approval and implementation in 1988.

Level 1 Candidates whose expectations are no higher than Grade 3 CSE will answer just one formal written paper and a series of basic tests. These tests will be taken during the spring term of the examination and will be set on a number of themes from everyday situations. The marks of the best five scores in the tests are submitted.

Level 2 This corresponds directly with CSE, offering grades 1-5 and GCE grades C-E. Thus an O level pass is possible, but an exceptionally high score must be achieved. This level is targeted at CSE grades D and E and candidates who are capable of an O level pass should find a higher level more appropriate. Candidates who have studied successfully to this level should be equipped mathematically to take up certain apprenticeships, clerical jobs and pre-vocational training courses.

Level 3 This combination will provide a more appropriate examination for the many candidates who at present find the O level papers too easy. Successful candidates should have the mathematical background required for apprenticeships of a more technical nature, for jobs requiring some facility in mathematics, and for certain further education courses.

Level 4 The O level grades A-E are offered. Successful candidates will have a firm foundation for further work in mathematics at A level and beyond, and also be able to apply mathematical principles in differing contexts in further education, commerce and industry.

Level 5 This includes an extra paper, taken with Papers 3 and 4, which is intended for those who will be able to demonstrate a high ability in mathematics and who enjoy the challenge of applying it in unusual situations. This paper is a mix of more basic or level 4 together with some questions on an optional extended syllabus.

An integral part of the teaching and assessment of the proposed MEI GCSE scheme will be a series of coursework assignments undertaken by pupils at all levels. There will be one

task set for each of the first four terms of the two year course; the first three tasks are largely prescribed and pupils will at a short test on the mathematical content of each task on its completion. The fourth task is more of an extended project, and this will conclude with a short interview with each candidate to test the understanding of the methods used and the ability to communicate the main conclusions to an impartial observer. Some mental arithmetic tests will also form a part of the coursework programme.

For the Joint Scheme, coursework assignments will be compulsory only at Level 1. At the other levels they will be optional, and the scores obtained will be included in the final assessment only if a candidate's grade is thus improved. From 1988 it seems unlikely that teachers will be ready for compulsory coursework at all levels, not to mention the candidates, though it is our intention to have sufficient material prepared in time. Such project work is not new to MEI; candidates have for many years had the option to submit extended pieces of work with their Special Papers in Mathematics, or Further Mathematics at A level.

The MEI Project has embarked on an ambitious programme to prepare a bank of coursework assignments in time for GCSE courses to begin in 1986, with a set of pilot tasks available for the Joint Scheme. Each assignment will be accompanied by detailed guidelines on conduct and assessment, and a network of MEI Coursework Consultants has been set up in the regions. The consultants will arrange meetings with school representatives to hand out and explain the new material and to give advice on classroom practice. In this work, we have been greatly assisted by Professor David Burghes (Exeter University) and funds from the Department of Trade and Industry's "Industry Education Unit" (chaired by Bob Gannon from the Southern Science and Technology Forum at Southampton University). It is fully expected that many candidates will wish to make use of a computer as a resource in their coursework assignments, either at school or at home. This would take the form of

the use of a standard package such as a graph plotter or statistical analysis program; alternatively candidates would write their own program, and in this event a flow chart or structure diagram would normally be included in the assignment report to indicate its operation.

The last three MEI Conferences have concentrated on the A level syllabuses; as a part of the continuing process of preparing teachers for the many changes associated with the introduction of GCSE, this year's Conference is entitled "Mathematics at 16-plus". It will be held at St Peter's College, Oxford, on July 22-24. Guest speakers will include David Burghes (on Coursework), Freddie Mann (on the Secondary Examinations Council) and Peter Reynolds (on the Grade Related Criteria).

It seems unlikely that the advent of commonplace microcomputers in schools will have a further impact on the mathematics syllabuses at 16-plus since many of the changes associated with computational power at this level occurred with the introduction of the calculator. On the other hand, the impact on teaching methods has already proved fundamental, and pupils are now learning to treat the computer as a resource to further their individual study. Progress in these areas, though, is restricted by the numbers of machines available in schools; the prospect of one computer per classroom is still a distant dream in the UK, and until this happens these new opportunities are necessarily confined to those with the hardware (and software) immediately to hand.

Developments at senior secondary level are potentially much more radical. MEI will be represented at a one-day conference being called in July (in London) by the Joint Mathematical Council of the Royal Society to initiate discussion on a new Mathematics A level which fully take into account the arrival of the micro and any foreseeable developments (such as symbolic algebra and calculus systems). In the past year, in an effort to keep in the forefront of developments in mathematical education, MEI has contributed to ICME 5 (in Adelaide), the ICMI Symposium on "The Influence of Computers and Informatics on Mathematics and its Teaching" (in Strasbourg), and the Mathematical Association Conference (in Dundee). MEI has also published an expanded and completely revised version of the *Programs for Mathematical Computing* by Philip Couzens, which are now in wide use in schools and colleges throughout the UK and abroad.

Available from the Oxford and Cambridge Board, 10 Trumpington Street, Cambridge CB2 1QB

1. Details of the MEI Joint O level/CSE Scheme (Syllabuses, Specimen Papers and Coursework material).

2. MEI A/O level Additional Mathematics and A level Mathematics (Syllabuses, recent past papers, formulae and tables booklet).

Available from the MEI Office, 41a West Street, Oundle, Peterborough PE7 4EJ

1. Details of the MEI Conference on "Mathematics at 16-plus".

2. MEI Monographs, A level Worked Solutions, past Conference Reports, MEI Newsletters, details of membership.

3. MEI Programs for Mathematical Computing (for the BBC Micro; a version for the Electron is in preparation). Eighteen interactive teaching programs for secondary mathematics, priced £20.00.

Modelling symposium

Teaching and Applying Mathematical Modelling. Edited by J S Berry, D A O Moscardin, D J G James. Ellis Horwood £35. 0 85312 728 X.

The distinguished list of names of editors and contributors to this symposium suggests that a significant addition to the literature of a burgeoning subject could have appeared. Careful detailed reading (and much of the text demands concentrated attention) confirms the prognosis.

Applications of mathematics now constitute a much more fashionable field than the erstwhile abstract theorizing. Industrial and technological developments require the translation of a real problem into mathematical terms, and the interpretation by those who prepare a mathematical solution into a form that is comprehensible to fellow-workers.

The growth of interest in the subject led to an international conference in 1983, from the proceedings of which this collection of papers is derived. The main thrust was on the teaching of modelling and the provision of appropriate courses. A few sample phrases may indicate the message: "Mathematical modelling should be taught by requiring students to design and develop their own models for some practical situation, and not just analyse and apply those of others."

In other words, students should "actually use their mathematical powers in trying to solve an open practical problem"; thus they should "see mathematics in action, explaining and predicting" in "an atmosphere of enquiry, investigation and modelling".

So it is necessary to inculcate principles and practices. Basic information and detailed ramifications, are packed into these pages. If the educational curriculum, whether in school or university, is to be extended, the topics to be added must be justified and guidance on the methods of introduction offered. Here we have expert coverage of the purposes of modelling, details of case studies in the subject and in the teaching of the subject, evaluation of action taken and possible future action, and sets of references dealing with the whole range of relevant material. In short, it is a complete answer to the essential questions, what, why and how?

F W Kellaway

No tables

Alpha: A Mathematics Handbook. By L. Rade. Chartwell-Bratt, Old Orchard, Bickley Road, Bromley BR1 2NE. £4.95 + £1 p&p. 0 86238 036 7.

Echoes of the Cockcroft Report and pre-conferences of the April 1985 DES pronouncement on mathematics curricula are prominent in this useful collection of data and formulae. First published in Sweden some three years ago, a competent English translation contains extensive coverage of all the fundamental aspects of mathematics likely to be encountered at school or college level.

Programming and numerical analysis, probability and statistics take their places alongside the traditional algebra, geometry and trigonometry. But with the development of calculators and computers, the need for basic tables has gone, and these have been omitted. So, no logarithms, no numerical or trigonometric functions, are tabulated. What remains, including biographical notes and a glossary, is completely comprehensive, and forms a highly recommended reference tool.

It's the context that counts

by Martin Skelton

Searching for that elusive "ideal" maths scheme is a popular activity in primary schools, a fact underlined by the willingness of most of the major educational publishers over the past few years to either bring out new maths schemes or up-date existing ones. At an exhibition recently I was interested to see teachers examining many of these new schemes. Most of these teachers were primarily concerned with the mathematical content, busily searching through to see "how it does decomposition", or whether it includes base work.

I believe we are reaching the point where this is the wrong emphasis. Of course, the soundness of the mathematical content is important but - whilst there are still one or two dire mathematics schemes on the market - most of those published by the major publishing houses are now sound enough mathematically to pass all but the most severe criticism. What is important is that we understand the context within which a maths scheme has to operate. I believe an understanding of this context to be neglected and that this neglect explains why schools often remain dissatisfied even after having committed themselves to heavy expenditure on what appear to be very sound schemes.

We are likely to be more satisfied with the maths schemes we buy if our criteria for choice arise out of a better understanding of the context within which any scheme has to work. Such a context will vary from school to school, but it is possible to identify three elements which apply almost anywhere; teachers, the school as an organization and children.

Let us consider the position of teachers first. Most primary teachers find mathematics difficult. Few of us are specialists and, despite suggestions by HMI, increased funding, re-direction by colleges or personal in-service work, the position is not going to change radically in the next ten years. Moreover, as Edith Biggs pointed out in "Confident Mathematics Teaching 5-13" not only are most of us non-specialists but few are implicitly familiar with modern methods of developing mathematical understanding. "Few teachers," she said, "have learned mathematics through investigation themselves." Schemes, therefore, are important to the understanding of teachers.

A second consideration is that teachers are under cross-curriculum pressures at a time of reducing school size. My own authority is, rightly, pushing the development of science, technology, design and humanities. We need to understand the effect upon the primary school teacher who is usually individually responsible for all these subjects - and more - in the classroom. The net result is that as more evidence is made available about the teaching and learning of mathematics there is less time available to absorb it and less time for mathematics to be considered significantly important.

The third problem is one of classroom organization. Effective organization is vital to good primary teaching and yet many teachers feel unhappy about the ways in which we organize our classrooms. This has been particularly true in recent times since however much our heads have been stuck firmly into the sand it has been impossible to miss the overwhelming evidence that practical and discussion work are two of the keys to effective teaching and learning of mathematics. Knowing this does not, however, improve classroom organization by itself, and I am sure that one of the reasons for "insufficient practical/discussion work" is because of the difficulties teachers experience in making it happen.

Finally, there is the awkwardness of mixed-ability classes. I am a firm believer in mixed-ability teaching in the primary school, although this is not easy in mathematics, where a structured, hierarchical pattern of work should cause these children who are not working at their right level to stand out more prominently. The difficulties here are about both the provision of purposeful work for groups of differing abilities and the organization of classrooms so that remedial work can be properly undertaken.

In order to help teachers, therefore, mathematics schemes need to be clearly organized with teachers manuals which provide well-written background to the mathematics as well as the answers to text-book questions. Schemes must enable teachers to provide practical and discussion work within an overall structure rather than assuming that such activities will somehow take place once basic mathematics has been provided. Finally, schemes need to provide teachers with the means to organize mixed-ability teaching as well as to offer sufficient material to stretch the able and compensate the less able. It is not enough simply to alter the speed at which progression occurs through the basic scheme. Breadth is as important as length.

The context of the school as an organization sometimes creates a different perspective to mathematics than that of the classroom teacher. One of the problems faced by schools who use either no scheme or a variety of schemes is that unless clear monitoring takes place there is no clear indication that each unit of work is properly building on what has gone before. Schools should be concerned about the structured progression of work for children from the time they enter a school to the time they leave.

Schools share with individual teachers concern about evaluation. Much is said about the horrors of the continual testing of primary children, but it would be a poor school which did not attempt to find out how successfully its children were able to use the learning experiences put before them, or how well those children were performing against established criteria.

Furthermore, if structured progression is to be achieved, there are needs for record-keeping systems which reflect children's progress. If, as was suggested earlier, many primary teachers are not familiar with good teaching methods in mathematics or even happy with it as a subject, then the same must be even more true of the parents of the children whom we teach. Their concern will be reflected through their attitudes and those of their children. Parental confidence in mathematics is more important in the primary school than in the secondary school because most parents of primary children feel that they have undergone experiences similar to those of their children. Schools ignore at their peril the need to make contact with those parents who are interested. At the present time there may be a problem in legitimizing mathematics for a parent body whilst at the same time providing what seems to be the most effective mathematics for children.

Finally, the provision of resources is an important contextual element for schools. Less money is having to provide more resources across a broadening curriculum on the one hand whilst on the other the time available to make resources decreases if it has to be spread amongst more "subject" areas. A common fault with mathematics schemes in the past is that they have expected schools to produce considerable amounts of resource material in addition to that normally available in classrooms.

For schools, therefore, mathematics schemes need to make the progression clear throughout the entire scheme, should provide some means of usefully evaluating progress and should be designed to appeal to parents. If possible providing material which explains to parents the rationale behind the scheme and why what they are likely to see taking place in classrooms is happening. Equally, schemes need to use naturally available resources rather than banks of constructed ones.

We turn, last, to the context of the child. Structured mathematics is unfamiliar to most children on entry to school and many may not be ready for formal mathematics at all; in itself, this makes important demands upon schemes. Even if children are ready, the mathematics needs to be displayed in such a way that it provides motivation through children's own understanding and experiences. As Geoffrey Howson said in the TES last year, "The reality on which the discussion is based must be the reality of the child."

Layout and colour are also likely to have an effect upon motivation. A glance at the range of reading materials - books and magazines - on offer to children outside school will quickly show just how visual a world is presented to them. We may bemoan the declining supremacy of the word but we also have to cope with it and any material presented to children in school needs to be aware of the competition it faces in capturing interest and match it. Poorly presented, dull material can no longer survive.

The reading children do come across within a scheme would be carefully matched to age-levels, a fact not often understood by writers of maths schemes. Apart from the debilitating effect of constantly being unable to read instructions or teaching points

consider how much working time must be lost by children who wait for teachers to explain instructions only to find that the mathematics presents little problem.

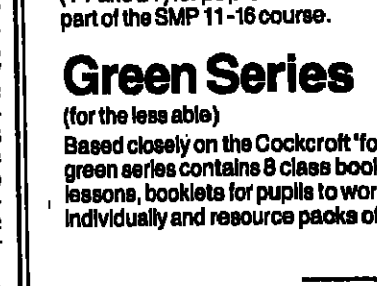
Of course, the other contextual elements mentioned in this article also have their effect upon children. Poorly organized teachers, lacking in confidence with a poorly organized scheme and scant resources are hardly likely to increase a child's desire for mathematics to mention his confidence and

ability within it.

For children, therefore, schemes need to provide preparatory material built into the main structure and importantly need to get the appeal right. Schemes should be about the child's own world, should be able to be read by a majority of children at independence level and should be bright, lively and very contemporary. Looking, then, at the overall contextual mix of teachers, schools, parents and children within which maths schemes have to work it is possible to arrive at a set of criteria which are different from the strictly mathematical-

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Model reflections

by D. N. Smith

Teaching Mathematics is a complex job. Some teachers hold views of Maths teaching which, if unexamined, can often be simplistic. Such models have their uses; my own favourite in such circumstances is The Golden Rule: "Do Not Assume They Know Something". This provides a useful shorthand way of reminding myself of the importance of good foundations for conceptual understanding.

I propose to outline a commonly used model of Maths teaching and to illustrate both its powerful appeal and flawed simplicity. I shall call it the Direct Model, see Fig 1 below.

Teachers using the Direct Model tend to place paramount importance on good examination results. They believe that their aim should be to get as many exam "successes" as possible, and their objective should therefore be to cover the syllabus at an appropriate rate following a scheme of work which leaves time for revision and "past papers" at the end.

Teachers use the Direct Model with various degrees of sophistication. The "teach some of it" section can involve a wide variety of methods or it can, with another teacher, involve mainly exposition. The Direct Model is considered efficient because it represents the shortest distance between two points: (i) where the pupils are now, and (ii) where they need to be for the examination. At its best the Direct Model can lead to an interesting treatment of the syllabus with fair revision and exam preparation.

Before considering an alternative, it is worthwhile looking at the faults of the Direct Model. In the context of avoiding the same pitfalls, in criticizing the Direct Model I have chosen not to discuss in detail its underlying value judgement that examination results are of paramount importance, but to concentrate on its assumptions of fact.

I shall begin by taking an example of a question that might be found in a Maths exam.

A manufacturer of gas cookers sells them to a Gas Board for £40 each thus making a profit of 25% on his cost price. The Gas Board sells them for £58 each. Find:
(a) the manufacturer's cost price
(b) the percentage profit made by the Gas Board

What exactly does the student have to do in order to answer the question? I have made a list of some of the actions.

- Read the question
- Interpret what kind of answer is required
- Decide how to arrive at the answer
- Extract the required information, for example:
(Cost Price) + (25% of Cost Price) = £40
- Symbolize the information, for example, $x + (x/4) = 40$
- Solve the equation, $x = 32$
- Check that the answer is sensible
- Check for completeness (no, part (b) still to be done)
- Profit = £18
- Percentage profit = 45%
- Check dimensionally correct (no, it should be 45%)

I have asterisked those actions that the pupil is required to take which are not normally mentioned in the syllabus. It would appear that there is an explicit syllabus (usually printed) and an implicit syllabus. Thus a major blow is dealt to the start of the Direct Model, and to the "factual" assumptions on which it is based. It is important in developing a new model to include teaching of both explicit and implicit syllabuses. In further justification of extra syllabus teaching I offer the following observations:

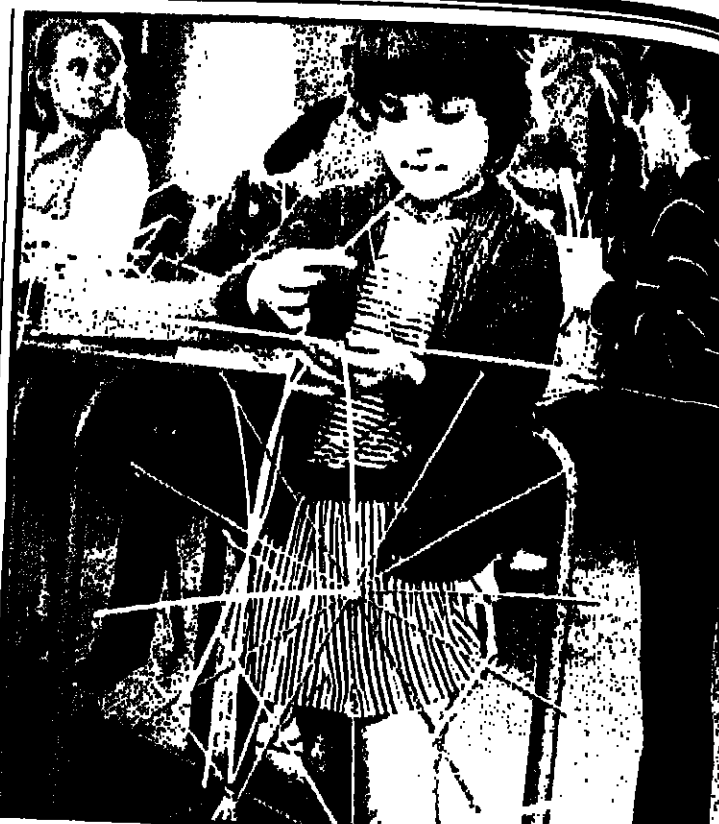
1. general strategies of problem solving need to be covered explicitly, (pupils cannot be expected to develop these skills themselves or to pick them up on a casual basis)
2. many extra-syllabus items are worthwhile because they generate enthusiasm for the subject;
3. some extra-syllabus items may unify or illuminate the explicit syllabus;
4. sticking rigidly to a syllabus makes it more difficult to follow up pupils' interests and dampens spontaneity;
5. the explicit syllabus does not cover enough to enable pupils to do well in an examination.

Fig 2 below shows the Selection Model, which is an attempt to replace the Direct Model with an improvement at the same level of complexity. The box labelled "Teach some of it" has been replaced by "Develop some monoskills". I use the term monoskills to describe skills in mathematics which perform a single task. Some examples of monoskills include:

- the calculation of the hypotenuse using Pythagoras' Theorem
- cancelling a fraction to its simplest form
- deciding whether a network is traversible
- differentiation of a polynomial
- setting work out clearly
- measuring length to the nearest centimetre

I have avoided writing "Teach Monoskills" because pupils can and should develop their own monoskills through a wide variety of methods, some of which are mentioned in Cockcroft paragraph 243. At this stage we can reflect on pupils possessing a range of monoskills which will need revising and combining to solve problems. In the terminology that I have used problem solving becomes "the appropriate selection and ordering of monoskills to reach the required result". I believe that "developing selection skills" is a more powerful (and inclusive) process than revision. "Developing selection skills" can also provide motivation for acquiring monoskills, especially when the next monoskill can be identified as a necessary step in a complex problem that pupils are engaged in.

I need to clarify the teaching methods that I have in mind for developing selection skills; it may help to make a distinction between two exaggerated alternatives. One way of developing selection skills is for the teacher to take a complex skill and demonstrate to pupils how to break it down into simple monoskill steps, which taken one-at-a-time lead to the solution. This is far from what I have in mind as a main method for the pupils, not encouraging them to do it for themselves. The exaggerated alternative would be to present pupils with a complex problem for which they have the



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necessary monoskills, and then refuse to give clues on the solution. This is also not what I have in mind as a main method, although I sometimes use it, cautiously.

Somewhere between the teacher doing all or none of the selection of monoskills, lies a sensible balance often dictated by the nature of the problem to hand. Through discussion between pupils, trial and error (important), parallel examples, analogies, etc pupils are encouraged to develop their own selection skills.

Returning to the model and looking at what a pupil would experience, it seems that most of the time is spent on the cycle of "developing monoskills and selection skills", it rapidly becomes unimportant which came first.

This cycle of events comes to an end when time has run out rather than when the syllabus has been completed. This is intended to give a more open feel to the model, which would hopefully be reflected in the teaching, while still acknowledging the existence of outside pressures.

I offer the Selection Model as a basis for discussion, improvement or refutation. It is purposely simplistic in order to be mentally portable and accessible. As it stands, not enough emphasis has been placed on the use of imagination, on enjoyment and affective aspects of learning Maths.

D. N. Smith is Head of Maths at The Upper School, Sturley, Telford.

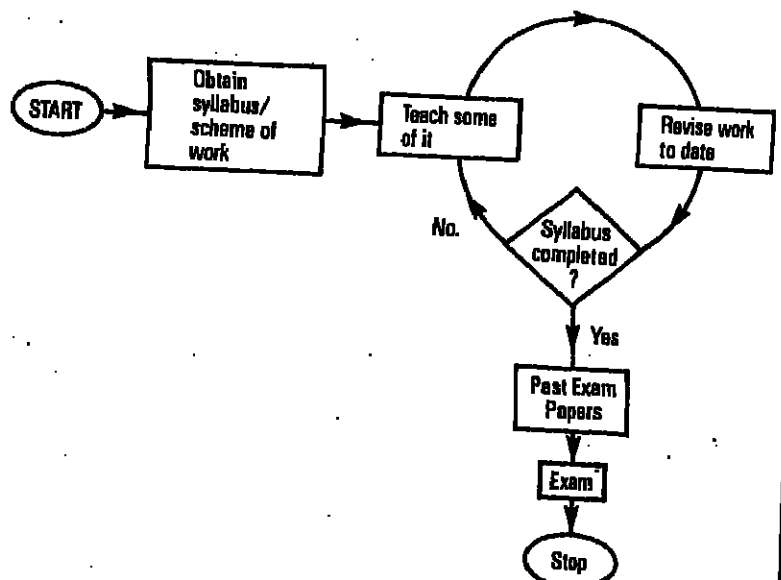


Fig 1. The Direct Model

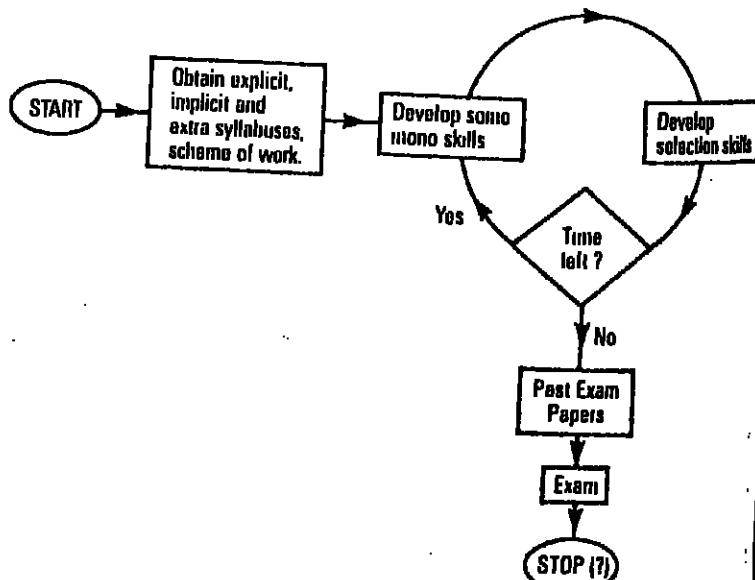


Fig 2. The Selection Model

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Homespun

Mathematics for Everyman. By Laurie Buxton.
J.M. Dent £3.95. 0 460 02402 7.

This is the paperback version of the text originally published last year in the Everyman Reference series, and previously reviewed in these columns. The author, who has long been associated with attempts to popularise mathematics, provides an overview of mathematics in 270 closely typed pages. The scope of this overview is vast and the author has set himself a very ambitious task. Starting from a basic practical calculation, he ranges through all the main areas of mathematics, discusses its applications, and finally embarks on a philosophical discussion of its nature. The deliberately "popular" style of writing gives the book a rather homespun, rather than formal, flavour. I am not sure who might profitably read this - interested school-leavers for instance would be better off with almost any of the texts in the brief "suggestions for further reading". Whether this text will even



usually join the league of Hogben, Sawyer, Davis and Hersh et al is doubtful, but only time will tell. However, it might well be a useful addition to the school library.

Neil Biddy

Current practice in the assessment of low attainers

by Derek Foxman

materials figures prominently in APU passes and set squares. Some schemes involve the use of a wide range of practical tests - blocks, tiles, money, scales. The APU team distinguish three meanings of "practical": "everyday experiences" such as planning a day out or costing a party; measuring and constructing; and investigating mathematical ideas and relationships using apparatus as an aid. Four schemes include practicals of the APU type, which like APU, vary in the amount of handling of equipment involved. One other scheme allows for one-to-one tests but leaves the decision about including them to individual teachers. The phrase "interactive testing" was also used in these schemes to describe APU type practical testing.

In many other courses "interactive" refers to interaction with computer programs, but none of the schemes include assessment using computers.

More confusion arose over the terms "project work", "coursework", "investigations" and "problem solving" and they are often used indiscriminately.

"Coursework" can mean a project or regular tests given at the end of a section of the syllabus, or sample of classwork. An "investigation" can refer to a survey or an open-ended study concerned with mathematical relationships. "Problem solving" often describes examination-type questions involving several stages of computation or reasoning. It can also refer to situations rather like investigations requiring planning strategies, conjecture, specialization and generalization.

"Mental" and "oral" are often used interchangeably; "oral" can also refer to APU-type one-to-one interviews using apparatus.

There is clearly a need to classify the profusion of test and question types which are emerging in the post-Cockcroft era. One set of distinctions to be made in relation to test type is between:

- (i) the way the pupil receives the questions (printed form, aural form, etc),
- (ii) what method is available for working (practical, written, mental, etc), and
- (iii) the kind of response made (oral, written, construction, etc).

Thus the most usual kind of mental test is, on these dimensions, an aural-mental-written test, while the APU one-to-one interview is an aural-practical-oral test. Other dimensions relate to the time given to the pupil to produce the materials to be assessed and whether interaction with a tester or other pupils is allowed.

The Cockcroft Report stated that mathematics should be done in context. The reviewed schemes demonstrate that contexts can vary in breadth, for example, from no context, through isolated measurement tasks, to measurement for a purpose. A purpose can be real or simulated; for some teachers it is not sufficient for their pupils to plan a day out or a buffet party unless these events are to take place in actuality. Thus, one scheme assesses skills only in practical tasks; these do not have to take place in mathematics lessons - measuring length may be tested in woodwork and proportion when recipes are planned in home economics classes. "Variations in life" breadth of the context used are evident in those

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- Simple language and attractive colourful design

Foundation Maths Set A provides a one year course for the fourth year (or S3 in Scotland). Set B will be published for 1986.

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6 POSTS

- (1) SENIOR LECTURER - DEPUTY HEAD OF DIVISION OF BUSINESS STUDIES
- (2) LECTURER GRADE 1 - DIVISION OF MECHANICAL AND PRODUCTION ENGINEERING

To teach mechanical and production engineering subjects.

- (3) LECTURER GRADE 1 - DIVISION OF COMMUNICATIONS
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With qualification in Special Education. Re-advancement

- (6) ASSOCIATE LECTURER - DIVISION OF ELECTRICAL AND ELECTRONIC ENGINEERING

Salary Scale: 80% of Lecturer Grade 1. Required to teach electrical and electronic subjects.

Please indicate post applied for. All the above posts are required for 1st September 1985, and the closing date is 23rd May 1985.

Application form and further details (SAE please) available from/returnable to The Chief Administrative Officer at the College.

ACCRINGTON & ROSSENDALE COLLEGE

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LECTURER GRADE 1 - ENGINEERING

Especially Mechanical and Production Engineering, craft practice and B.T.E.C. courses, school link courses and specialist short courses for industry.

Required 1st September 1985, and the closing date is 23rd May 1985.

Application form and further details (SAE please) available from/returnable to The District Education Officer, Education Offices, Ewbank House, Cannon Street, Accrington. (17618)

BOURNEMOUTH & POOLE COLLEGE OF ARTS & DESIGN

Applications are invited from suitably qualified and experienced designers for the following posts:

- LECTURER 2 COURSE DIRECTOR
- BTEC NATIONAL DIPLOMA COURSE IN SPATIAL DESIGN (Interiors, Exhibition Design, Television and Stage Set Design)
- LECTURER 2 YEAR TUTOR TO BTEC HIGHER NATIONAL DIPLOMA COURSE IN SPATIAL DESIGN (Interiors, Exhibition, Television and Stage Set Design)
- LECTURER 1 THREE DIMENSIONAL DESIGN FOUNDATION AND G.A.D. COURSE

The above posts are tenable as soon as the appointees can take up appointment. Closing date for applications May 24th, 1985.

Detailed job specifications and application forms available from the Senior Administrative Officer, Bournemouth & Poole College of Art and Design, Wallisdown Road, Poole, Dorset. Telephone (0202) 533011.

EXPERIENCED COMMERCIAL TEACHERS

The Pitman Learning Centres, which provide both private shorthand/typewriting training and commercial courses for the Youth Training Scheme in keyboarding, typewriting, office technology and office practice, have the following vacancies:

- BRADFORD - Senior Commercial Instructor
- BRISTOL - Commercial/shorthand Instructors
- GRAVESEND - Senior Commercial Instructor
- THORNTON HEATH (Croydon) - Commercial Instructor

Applicants should be appropriately qualified to provide high-quality training in commercial subjects (as specified above). For full details, please write enclosing your CV to:

Mrs Elizabeth Butry, Pitman Training Services
6 Southampton Place, London WC1A 2DQ. (17674)

DERBYSHIRE COUNTY COUNCIL

DEPARTMENT OF BUSINESS STUDIES

Lecturer Grade I in Business Studies

The successful applicant will teach a range of subjects appropriate to BTEC General Certificate and CPVE students. An interest in Information Processing will be advantageous.

Lecturer Grade I in English and Communication

This post is to replace a member of staff on one year's secondment. The successful applicant will contribute to the teaching of English and Communication across the Department.

Lecturer Grade I in Office Arts

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Lecturer Grade I in Travel and Tourism

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Lecturer Grade I in Computer Education

A qualification in Computing is desirable but persons qualified in other disciplines who have developed an interest and expertise in Computing will be considered. Applicants should preferably be teacher-trained.

Department of General Studies and Catering

Associate Lecturer Grade I in German

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Derby College of Further Education

Department of Business Studies

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Temporary Associate Lecturer Grade I in English

Required for September 1985 to teach mainly full-time GCE students. Candidates should hold a degree in English Language with a teaching qualification. Ability to offer English Language to 'A' level would be an advantage.

Salaries in accordance with salary scales for teachers in (under review). Associate Lecturer 80% of Lecturer 1 salary. Application forms and further particulars are available from:

The Chief Administrative Officer, Derby College of Further Education, Wilmore Road, Derby, DE2 8UG. Telephone: Derby (0332) 73012. Completed application forms should be returned by 24th May, 1985.

GRAMPIAN REGIONAL COUNCIL

MONACH COLLEGE OF FURTHER EDUCATION

LECTURER IN HAIRDRESSING

Required to teach hairdressing and associated subjects such as manicure, cosmetic make-up, to full-time students following modular programmes. Applicants must hold City & Guilds 760 Certificate at Advanced level. Additional qualifications in hairdressing, manicure, cosmetic make-up and experience or a teaching qualification advantageous.

Applicants should be suitably qualified and hold recognised trade and craft qualifications with relevant industrial experience. Preference given to candidates with teaching experience.

Salary for both posts £7,989 to £10,881.

Application forms and further details from Director of Education, Woodhill House, Aberdeen AB9 2LU (copies) should be lodged by 24th May 1985. (12037) 220026

HAMPSHIRE COUNTY COUNCIL

ALTON TERTIARY COLLEGE

POST IN SOCIAL SCIENCE

Teaching of social science and general social science to various A and O and vocational courses. Alton 85118 or write to the Principal, Alton College, Old Aldham Road, Alton, Hants. (12037) 220026

NEWPORT COLLEGE OF FURTHER EDUCATION

Applications are invited for the following vacancies. Required for 1st September 1985.

- (a) LECTURER I IN ELECTRICAL AND ELECTRONIC ENGINEERING. This post involves the teaching of electrical and electronic theory and practice to students on a variety of City and Guilds Craft and B.T.E.C. courses.
- (b) LECTURER I IN ELECTRONICS AND MICRO-PROCESSOR APPLICATIONS. This post involves the teaching of Electronics and Related Computer and Micro-Processor applications to engineering students on City and Guilds Craft and B.T.E.C. courses. The person appointed will be required to assist with the development of a micro-processor/systems laboratory.
- (c) LECTURER II IN HAIRDRESSING AND BEAUTY THERAPY SUBJECTS. Applicants should possess City and Guilds Advanced Hairdressing and Beauty Therapy qualifications or the equivalent, a teaching qualification and/or teaching experience preferably in the field of further education together with experience in the Hairdressing and Beauty Therapy professions. Salary range: Scale Lecturer I £5,910 - £10,512, Lecturer II £7,548 - £12,098.

Application forms and further information, when available, obtainable from the Director of Education, Staffing Section, County Hall, Cwmbran, Gwent, NP4 2KG, on receipt of an a.s.e., should be returned to the Principal by the 24th May, 1985.

Derbyshire County Council

DEPARTMENT OF BUSINESS STUDIES

Lecturer Grade I in Business Studies

The successful applicant will teach a range of subjects appropriate to BTEC General Certificate and CPVE students. An interest in Information Processing will be advantageous.

Lecturer Grade I in English and Communication

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The Chief Administrative Officer, Derby College of Further Education, Wilmore Road, Derby, DE2 8UG. Telephone: Derby (0332) 73012. Completed application forms should be returned by 24th May, 1985.

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Post Overseas Middle East Headmaster Private School

The British Council will be undertaking recruitment for the Headship of a prestigious private school in the Middle East for January 1986. The school is bilingual, Arabic/English with an enrolment of about six hundred pupils in the age range 6-17 years.

Qualifications: candidates should be male, preferred age range 40-50, already holding a Headship or post of near equivalent responsibility. Previous overseas experience is desirable. Knowledge of the Arab world would be very helpful. A minimum of ten years in posts of senior responsibility is essential.

Salary: within the range £3,400-£4,600 per month tax free (payable in local convertible currency).

Benefits: free furnished accommodation, first class air travel, baggage allowance, medical expenses for post-holder and family, paid annual leave.

Contract: two years renewable.

Reference: 85 A 6 T

For further details and an application form, please write, quoting the post reference number to: Overseas Educational Appointments Department, The British Council, 90-91 Tottenham Court Road, London W1P 0DT.



Khartoum International Primary School Sudan

A private English-medium school providing education from pre-school nursery level to lower secondary based on the British educational system, for 300 children with multi-national background.

Teachers are required from August 1985 for the following posts, Infant, Lower Junior, Upper Junior, Music plus Primary subjects and Lower Secondary, Science.

CANDIDATES must be qualified, with at least one year's experience. They should be of British or Commonwealth origin, with English as mother tongue. Males or females may apply, but the present staff are female. Teaching couples, without children will also be considered.

SALARY AND CONDITIONS: Contract for two years with salary on local scale, plus sterling bonus and gratuity. Free air-conditioned accommodation and utilities. Free medical care and insurance, subsidised local transport. Annual return fare paid.

For further details and an application form please contact Miss Carol Moss, Gabbittas-Thring Services Ltd., Broughton House, 6, 7, & 8 Sackville Street, Piccadilly, London W1X 2BR. Tel: 01-734 0161.

(12381)

Gabbittas-Thring



CAMBRIDGE ENGLISH SCHOOLS PROJECT JAPAN

International Language Centre, on behalf of Suntory Cambridge English Schools Limited and in association with The British Council, are recruiting a Director of Studies for a two year contract in their school in Shizuoka (Tokyo).

The Director of Studies will be responsible to the Principal for the day-to-day academic operation of the school. He will also be responsible for the supervision of and reporting on the work of teaching staff and the English language teaching standards of the school.

Candidates must have an MA or MSc in TEFL or Applied Linguistics and 10 years' TEFL experience, mainly overseas, including some at a senior level. A POCE in TEFL or an RSA Diploma in TEFL would be desirable.

A salary of ¥400,000 per month, plus an annual bonus of ¥800,000 is offered. Benefits include return airfare for applicant and family at the beginning and end of contract, medical cover, a rent allowance of ¥120,000 per month, a generous baggage allowance and six weeks leave per annum.

For an application form and further details, please contact: Personnel Department, International Language Centres, 9 Cavendish Square, London W1M 0DD. Tel: 01-680 4361.

Ref: 85/238/1. Previous applicants need not re-apply.

Overseas posts continued LAMCO

As managing agent for LAMCO, Granges International Mining of Sweden, offers the following important appointments in Liberia, West Africa

Teachers: International Schools (Full British curriculum)

Teachers (children ages 12-16 years)

Responsible for administration and teaching of English courses provided by the WORLD-WIDE EDUCATION SERVICE (the Company's schools being WES affiliated). Also to teach English to Swedish pupils. Ability to teach all subjects is essential, including one language and Science. Also ability to teach music and take responsibility for all musical activity is very important, or alternatively ability to teach arts and crafts. Should have appropriate degree plus teaching qualification or teaching degree. At least five years teaching experience.

Teacher (children ages 9-12 years)

Responsible for teaching English and general subjects. Ability to play the piano, lead choir and give music lessons, preferably also, ability to teach arts and crafts. Should be Teacher Training College graduate with at least five years teaching experience.

Teacher (children ages 6-9 years)

Responsible for teaching English and general subjects. Ability to teach arts and textile crafts to early grades. Should be Teacher Training College graduate with at least five years experience.

The positions offered are suitable for single men or women, or possibly married teachers without children, and able to take up the appointments mid-August 1985. Preferred age range 28-40.

Benefits include: Free housing (furniture provided at low rent). Free medical attention. Annual salary review. Non-contributory pension scheme. Settling-in and transportation allowances. Contract renewal bonus effective after twelve months service, counted from date of employment. Annual leave. Salaries, which are negotiable, will be paid in U.S.A. Dollars (subject to local tax).

The LAMCO Joint Venture operates iron ore mines at Mount Nimba, 170 miles inland, Yekepa and Buchanan are the industrial and residential complexes run by the company. The iron ore is transported by railroad to the port of Buchanan. There is one small international school at each community. English is the official language. Please send your application and all relevant details about training, qualifications and experience to:

GRANGES INTERNATIONAL MINING
(Dept TES1), Linen Hall, Room 643,
162-168 Regent Street, LONDON W1R 7FD.

TURKEY

Robert College Istanbul

For September 1985, Robert College requires a Physics teacher to share the teaching of the subject to A-level standard.

Robert College, pleasantly situated on the Bosphorus, is a co-educational boarding/day school, with 900 students.

The appointee will receive free furnished accommodation, medical insurance, travel and baggage allowances. A generous pension scheme is available. The contract is for 2 years optionally renewable for a 3rd year.

The salary is paid in Turkish lire and US dollars and depends on qualifications and experience but is not less than US \$6,500 (tax free).

Apply enclosing CV and the names and addresses of 2 referees to: The Head Mistress, Robert College, Arnavutkoy PK1, Istanbul, Turkey or, telephone Istanbul (code 010 901) 65 34 30.

(17801)

OVERSEAS POSTS

We require teaching staff for a number of English-medium schools world-wide.

Present posts include:

COLOMBIA:

Upper primary teachers, art/craft specialism preferred.

SUDAN:

Primary teachers, all age ranges, and lower secondary Science.

ARGENTINA:

Maths/Computer to 'O' Levels. H.M.C. Boarding school.

We are always interested in hearing from experienced teachers who seek a new challenge abroad. There are no charges to staff.

All posts include return fares and accommodation (if allowance).

Please send C.V. and details of 2 referees to Miss C. Moss, Gabbittas Thring Services Ltd., 6, 7, 8 Sackville Street, Piccadilly, London W1X 2BR. Telephone: 01-734 0161

Gabbittas-Thring



CAMPION SCHOOL

The Campion group of schools comprises three separate co-educational international schools in different parts of Athens with a total enrolment of 820 pupils between the ages of 3 and 18. There are 90 academic staff, the majority trained in the United Kingdom. The school is in membership of G.B.A. and is an overseas member of H.M.C. Applications are invited for the following posts for September 1985.

DIRECTOR OF MUSIC

Fully qualified graduate to be responsible for the music in the Senior School and to co-ordinate the music programme throughout the Senior and Junior Schools. The ability to conduct choirs and orchestral groups is essential, as well as to teach individuals in instruments and to teach classes up to O- and A-level, if required. A good record of administrative ability is also looked for. An ideal candidate would have had at least 10 years' experience and play a stringed instrument, but these are not absolute requirements.

ENGLISH

Fully qualified graduate to teach in the Senior School over the full age range from 11 to 18. Candidates should have a good academic background and be well read and should be competent in both language and literature teaching, without regarding them as separate entities. An ability to develop courses for non-examination classes will also be looked for.

JUNIOR SCHOOL TEACHER

Fully qualified teacher to be responsible for one of the top classes at the Junior School. A responsibility allowance would be payable for a teacher willing to take responsibility for boys' games. Experience in junior school science would be an additional qualification.

Posts would be on a two-year contract initially, but this is renewable. Applications (including home and school telephone numbers) together with the names, addresses and telephone numbers of two referees should be sent to the Headmaster, A. F. Eggleston, O.B.E., M.A. (Oxon), Garden House, Chester Place, NGRWICH, NP23 00Q. Telephone 0693-515025. Where he will be on 18th and 19th May. Interviews will be in London on 20th, 21st and 22nd May.

(17720)



DUBAI THE RASHID SCHOOL PACES have been instructed to recruit A Head of Humanities (Female)

for the Rashid School, Dubai, for September 1985 or as soon after as possible.

This is a challenging post for a teacher of imagination and enthusiasm, and there are opportunities to develop appropriate evidence based courses and materials. In addition to Head of Department responsibilities and duties there will be the requirement to supervise Geography and History 'O' level and later 'A' level examinations, as well as supervising other staff within the Department, and contributing towards the life of the school.

The Rashid school is a small all girls school of excellence and the successful candidate will equally be an outstanding Honours Graduate of a British University with at least 3 years teaching experience. Preferred age 25-35 years. Single status only. Previous experience as a Head of Department is not essential, but leadership qualities are.

The salary will be circa. £18,000 p.a. tax free with excellent conditions of service, including luxury flat, return air fare, baggage allowance and medical insurance.

If you feel that you meet the exacting requirements of this post, and would like to teach at this exclusive school, please forward a stamped addressed envelope for application forms and further details to: Dept. 6, PACES, 65 Eccleston Gardens, St Helens, WA10 3BN.

The closing date is 24 MAY.

OVERSEAS POSTS

continued

CHRISTIAN TEACHERS: especially of R.E., Maths, English and Science. For SECONDARY SCHOOLS in Africa. Volunteer terms - one year contract. Full preparation course, insurance and overseas allowances provided. Apply to: VOLUNTARY MISSIONARY MOVEMENT, Shenley Lane, London Colney, Herts. AL9 1AR. (or as appropriate). 460000

FRANCE
COTE D'AZUR
Wanted for a day nursery a graduate kindergarten mistress, to take care of a group of French children 3-3 years old. 7 hours per day, 5-day week, Sat. & Sun. free. One month's leave in summer, one week in winter. Must be able to write with photo and curriculum vitae to Madame Garin, 10 rue de la République, 06100 NICE. Tel: 486500. 460000

GERMANY
TEACHER OF GERMAN
FANTASTIC OPPORTUNITY. Interested in teaching English for a year in MUNICH. Contact Mr. A. Hauser, Rastatt 29, D-8000 München 80. Tel: 01049/8848 35. Or write to me as Defect, 10 rue de la République, 06100 NICE. Tel: 486500. 460000

GREECE
TEACHERS IN GREECE: EFL teachers required for language institutes in Athens, Thessaloniki, and other cities. Greece and the islands. Applications must be accompanied by a Certificate of Education. Please send curriculum vitae, recent photograph, phone number and 4-5 Mili. Teachers in Greece. 460000

ITALY
THE BRITISH SCHOOLS OF MONZA AND NOVARA
Require E.F.L. teachers (4 posts) Degree and R.S.A. Prep. min. grade 8 or equivalent. September appointment. Interviews July, London. Apply immediately by form only available from Mr. P. N. A. Taylor, Director of Studies, British School of Monza, 16 rue de la République, 06100 NICE. Tel: 093 364966. 460000

MALLORCA
KING'S PALMA
Well qualified experienced teacher (History/Geography) required. For August 1985. Send immediately full c.v. covering letter, names of 2 referees, phone numbers and photographs to: Mr. V. S. 15 Cautley Close, Quainton, Bucks. (MK45 2BS). 460000

ROME
An English day school requires for September 1985 an experienced graduate teacher of English to 'O' level. The ability to teach Art or History an advantage. Extra-curricular involvement will be expected. Closing date for applications 17th May. Interviews in London. Send a full c.v. including telephone number, English language, and 2 referees to: The Headmaster, Junior English School, 82 Via Grade, Altino, 00175 Rome. Italy (06) 465 3215. (07343) 460000

SOUTH ITALY
Required. Qualified, experienced E.F.L. teacher for modern private language school from October. Good salary and summer. C.v., recent photo and 2 referees to: Mr. V. S. 15 Cautley Close, Quainton, Bucks. (MK45 2BS). 460000

SOUTH AMERICA
Bilingual English teacher required in Colombia requires trained EFL teachers preferably with teaching experience abroad. Pleasant working conditions. Send hand-written c.v. with recent photograph to: Mr. A. J. 1000 Medellin, Colombia. (14488) 460000

SPAIN
BELLVER INTERNATIONAL COLLEGE
Spanish day school, 150 p. Requires teacher who can offer Biology/Games 11/16 year olds. Send fully detailed c.v. photo plus contact details to: Mr. J. 1000 Medellin, Colombia. (14488) 460000

CANADA

BRANFORD

EDUCATIONAL TRUST

LIMITED

Requires experienced graduate

staff at their small residential

college near Montreal for

U.K. students. Duties involve

personal and professional

responsibility and presen-

tation in one of two of the

following disciplines: ECO-

NOMICS, GEOGRAPHY, FRENCH

GOVERNMENT & POLITICAL

STUDIES, HISTORY

Applicants should be enthu-

siastic, young, energetic and

must hold a current driving

licence. The ability to cover

two disciplines an advantage.

Applications with full C.V.

and two references to The Sec-

retary, Branford College, 150

St. John's Lane, E.C.1M

48X before May 28th 1985

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